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[Part 1

ŚAIVISM AND THE INDUS CIVILISATION

By T. M. P. MAHADEVAN

‘AMONG the many revelations that Mohenjo-dāro and Harappā have had in store for us,’ says Sir John Marshall, ‘none perhaps is more remarkable than this discovery that Śaivism has a history going back to the Chalcolithic Age or perhaps even further still, and that it thus takes its place as the most ancient living faith in the world.’¹ The age fixed for the Indus Civilisation is the fourth and third millenia B.C., and Marshall is certain that in the highly developed culture of the Indus peoples no vestige of Indo-Āryan influence is to be found.² Among the finds on which Marshall bases his theory that Śaivism or what preceded it must have been prevalent in the Indus valley alongside the cult of the Mother Goddess the important ones are a male figure in meditative pose on a roughly carved seal and certain objects of cult-worship, *viz.*, those resembling the phallus, identified with the *liṅga*, and ring-stones, representing the *yoni* or vulva.

The figure on the seal which is regarded by Marshall as a prototype of the historic Śiva, is that of a three-faced God, ‘seated on a low Indian throne in a typical attitude

¹ See *Moh. Ind.*, I. vii.

² *Ibid.*, v.

of Yoga, with legs bent double beneath him, heel to heel, and toes turned downwards. His arms are outstretched, his hands with thumbs to front, resting on his knees The lower limbs are bare and the phallus (*ūrdhrameḍhra*) seemingly exposed, but it is possible that what appears to be the phallus is in reality the end of the waistband. Crowning his head is a pair of horns meeting in a tall head-dress. To either side of the God are four animals, an elephant and tiger on his proper right, a rhinoceros and buffalo on his left. Beneath the throne are two deer standing with heads regardant and horns turned to the centre.³

Sir John Marshall sees in this figure certain distinctive features which came to be attributed to Śiva in historic times. (1) The first trait to be noted is that the god is three-faced (*trimukha*). We know that Śiva was portrayed in later times with one, three, four, or five faces. Though only three faces are visible in the figure on the seal, it may well be that the god represented there is four-faced, with the fourth face to be understood at the back. The significance of ascribing four faces to the god is that he looks in all directions over the four quarters of the universe. (2) The second feature of this pre-Āryan god that links him with the historic Śiva, says Marshall, is his peculiar Yogī-like posture, with feet drawn up beneath him, toes turned down, and hands extended above the knees. Śiva is pre-eminently the prince of Yogis—the typical ascetic and self-mortifier, whence his names *Mahātapaḥ*, *Mahāyogī*. (3) Thirdly, the four animals grouped about the god probably indicate his lordship over the beasts. One of the appellations of Rudra in the *R̥g-Veda* and of Śiva in historic times in *Paśupati*, ‘lord of cattle.’ (4) ‘Still another attribute that helps to con-

³ *Ibid.*, 52.

nect this unknown God with Śiva, though it does not amount to actual evidence of identity, is the pair of horns crowning his head.' The horns in such cases have a special significance. They were regarded as the emblems of the deity into which category sometimes kings and priests were included. In later days the horns disappeared from the images of gods. But a survival thereof is to be found in the *triśūla* or trident, which is a special adjunct of Śiva. (5) Lastly, the historic Śiva may be connected to the figure on the Mohenjo-dāro seal through the deer beneath the seat of the god. 'Two deer in a like position are portrayed on many mediaeval images of Śiva, especially when he appears in the form of *Dakṣiṇāmūrti* or *Yogadakṣiṇāmūrti*; and a deer (*mṛga*) held in one of his hands is a frequent attribute of the god in other manifestations.' On these grounds, then, Sir John Marshall concludes that the god on the seal is the prototype, in his most essential aspects, of the historic Śiva.

That the grounds on which Marshall has built his theory are not unshakable, he is himself conscious. Regarding two of his observations the learned archaeologist has himself expressed doubt. What appears to be the seemingly exposed phallus may well be in reality the end of the waistband, he thinks. And he also agrees that the pairs of horns on the head does not amount to actual evidence of the identification of the god with Śiva. But he fails to see that similar doubts shadow the other points of similarity suggested by him. Brushing aside the hypothesis that the fourth face is at the back, could we identify the figure on the seal with Śiva because it has three faces? A categorical answer in the affirmative is not justified, as the three-faced figure may also mean, as Marshall himself does not fail to grant, 'a syncretic form of three deities rolled into one,' especially as 'the conception of the triad

or trinity is a very old one in India' and 'it was equally old in Mesopotamia.' The Yogic posture, again, cannot be a conclusive evidence for identifying the god with Śiva, because even among the Mohenjo-dāro finds we have in the same posture a statue of a male figure and a deity in a small faience sealing, for whose identification with Śiva we have no sound reasons. As regards the four animals, Marshall himself offers an alternative explanation in a footnote, where he says that 'it may be that the four quarters are represented by the four animals to the right and left of the deity, just as on the capital of Aśoka column at Sārnātha they are represented by the elephant, lion, bull and horse.'⁴ We are now left with the two deer beneath the throne; and it will not be difficult to see that they by themselves do not warrant the identification of the god on the seal with Śiva. All that we would like to say is that the figure on the 'roughly carved seal' provides very slender evidence for the theory which Sir John Marshall evolves out of it. The reasons such as he has been able to find do not provide enough ground for concluding that the god on the Mohenjo-dāro seal is the pre-Āryan Śiva.

Turning to the phallic emblems and the baetylic stones, Sir John Marshall observes that these must have formed objects of worship in the Indus valley. Among the Mohenjo-dāro and Harappā finds there are three classes of aniconic objects that merit attention in this connection. The first class comprises those which are unquestionably phallic, more or less realistically modelled, and also others which are more conventionized in shape whose phallic character, therefore, is not so obvious. Those other objects vary in size from half an inch to a foot or thereabouts in height. And Marshall's conjecture is

⁴ *Ibid.*, 53.

that they were all 'sacred objects of some sort, the larger ones serving as aniconic agalmata for cult purposes, the smaller as amulets to be carried on the person, just as miniature *liṅgas* are commonly carried by Śaivites of to-day.' The stones of the second class are more varied in size than those of the first; and in shape they are like many of the *liṅgas* seen in Śiva temples to-day. But since it is unlikely that the phallic emblem would have been conventionalised in two different forms in the Indus Valley, Marshall is led to think that probably these pertained to the baetylic cults which along with those of the Mother Goddesses would seem to have been prevalent then in the countries of the Near and Middle east. The third class of the stone objects comprises ring-stones found in large numbers both at Mohenjo-dāro and Harappā. Their size varies from half an inch to nearly four feet in diameter. Rejecting the alternative explanations that the ring stones might have been threaded on poles to form columns or that they might have been used as stone-money similar to the stone wheel-money in use on the islands of Uap in the Carolines, Marshall suggests that these ring-stones might have had the same cultural, fetish or magical significance that the ring-stones of the Mauryan period had and whose connection with the female principle could hardly be mistaken. Concluding his observations on the topic, the learned archaeologist says, 'whether these three types (of stones) represent three distinct cults is uncertain; but it is not unnatural to suppose that *liṅga* and yoni worship may have been associated then, as they were later under the aegis of Śaivism.'⁵

The assumption that lends countenance to the plausibility of Marshall's theory is that the worship of *liṅga* that forms an integral part of historic Śaivism is phallic

⁵ *Ibid.*, 58-63.

in character. Assuming that the *Śiva-linga* is a representation of the phallus, it is easy to connect it with the phallic cult objects found in the Indus Valley and elsewhere. But has the assumption a high degree of probability? Was the *linga-worship* derived from the phallic cults? It is no doubt true that phallic cult objects have been unearthed here and there by the spade of the archaeologists. Some of these have been found on the pre-historic sites of the Indus Valley. But what ground is there to connect the *linga* with these objects? In the *Anuśāsanaparvan* of the *Mahābhārata* we meet for the first time with the phallic interpretation of the *Śiva-linga*. The passages in which the account occurs are very late; and it is possible that the theory was evolved out of a confusion between the *linga-worship* and the cult of the phallus. Attempts have been made to read a reference to phallic worship in the word *śisnadevāḥ* occurring in the *R̥gveda*. This is what Macdonell says: 'A symbol must have been used, as at a later period, in the phallic worship which was known by the occurrence in two passages of the word "*Śisna Devāḥ*." "Those who have a phallus for their deity." Such worship was, however, repugnant to the religious ideas of the *R̥gveda*; for Indra is besought not to let the *Śisna Devāḥ* approach the sacrifice,⁶ and he is said to have slain the *Śisna Devāḥ*, when he won the treasure of the hundred-gated fort.⁷ In the post-Vedic period, the phallus or *linga* became symbolical of Śiva's generative power and its worship is widely diffused even at the present day.⁸ As against the view of Macdonell and others it has been urged that the word *śisnadevāḥ* admits of other

⁶ vii. 21. 5.

⁷ x. 99. 3.

⁸ Macdonell, A. A., *Vedic Mythology*, 155. Dr. A. P. Karmarkar takes the expression to mean 'those (Gods) possessed of a Śisna (*Śisnayuktāḥ devāḥ*)'. See B. C. Law Volume Part I, 459, 1945.

interpretations. Sāyaṇa, for instance, takes the word to mean 'those who sport with the *śiśna* (membrum virile), i.e., unchaste men.' and he quotes Yāska as his authority. Durgācārya, the commentator on the *Nirukta*, gives the same explanation as Sāyaṇa. Roth thinks that the word is a sarcastic appellation for priapic or lustful demons.⁹ It is by no means certain, therefore, that *śiśnadevāḥ* means worshippers of the phallus. Even if it did, it would only show that there were such worshippers in the age of the *Ṛgveda*, and would not prove either that they were identical with *liṅga-worshippers* or that the *liṅga* is a representation of the phallus.

It is worthy of note that there are explanations available of the *liṅga* which do not savour of the phallic cults. The word '*liṅga*' means 'mark' or 'sign.' In the present context it signifies the symbol of God. Just as the '*Omkāra*' is the sound-symbol representing Brahman, the *liṅga* is the form-symbol signifying the Most High. There are other *pratīkas* or images of God. But the excellence of the *liṅga* consists in its suggestion of the formlessness and infinitude of the Supreme. Properly speaking, there is no image of God who is *a-liṅga* (without distinguishing marks).¹⁰ But man requires for the purpose of concentration or meditation some mark which will stand for the Deity. And of all the visible representations, the *liṅga* is the least objectionable, because it serves to convey the idea of a God who transcends all distinctions. The *Līṅga-purāṇa* abounds in passages which endorse the view that the *liṅga* is but a symbol of the really uncharacterisable God. For example, one of the verses reads thus :

'aliṅgo liṅga-mūlaṁ tu avyaktaṁ liṅgam ucyate.
aliṅgaḥ Śiva ity ukto liṅgaṁ Śaivam iti smṛtam.'

⁹ OST, IV. 409.

¹⁰ See *Kaṭhopanishad*, vi. 8.

'The root of *linga* is what is without any mark ; the unmanifest is called *linga*. What is without any mark is said to be Śiva ; the *linga*, it is thought, is what relates to Śiva.'¹¹ There is also the story in the *Purāṇa* of how Śiva became a pillar of light whose top and bottom could not be reached by Brahmā and Viṣṇu. The *linga* may be regarded as a representation of this column of light. As alternative explanations are thus available, it would not be right to state dogmatically that the *linga* was evolved out of the primitive phallism. 'Of all the representations of the deity which India has imagined' observes Barth, 'these (*lingas*) are perhaps the least offensive to look at.'¹² In fact, in the mind of no genuine devotee of Śiva is the idea of the membrum virile generated when he worships the Śiva-*linga*.

In the absence of any conclusive evidence to show that the *linga* is a derivative of the phallus, the conjectures of Sir John Marshall lose their point. Of the three classes of cult objects discovered in the Indus Valley, the *linga* is to be connected, if at all, with the second group of stones which, even according to Marshall, are not likely to be the representations of the phallus. The archaeologist admits that in mediaeval and modern India it is only very rarely that *lingas* take at all a naturalistic, i.e. the phallic form. 'Ninety-nine percent of them,' he says, 'are so conventionalised that most people would find a difficulty in recognising their phallic character.'¹³ We would only add that there is no need to assume their phallic character.

In the preface to his monumental work, Sir John Marshall has made this wise observation, 'Our task is but just beginning. Fresh materials are coming to light almost daily, and our horizon, therefore, is insensibly changing.

¹¹ *Linga-purāṇa*, iii. 1.

¹² Barth, *RI.*, 262.

¹³ *Aob. Ind.*, I. 60.

In such conditions any approach to finality is out of the question.¹⁴ The position is not much different now from what it was when Marshall wrote these words. For aught we know, Śiva-worship may have prevailed in the Indus Valley alongside the cult of the Mother Goddess. But it must be said that the evidence provided by the figure on the seal is extremely inadequate. And the aniconic cult objects so far discovered do not establish the connection of the *liṅga* with the phallic cults.¹⁵

¹⁴ *Ibid.*, ix.

¹⁵ A study of the relevant Tamil literature leads to the same conclusion. There is no mention of *liṅga* and *pīṭha* (the circular base) in the *Śivajñānabodha*, the basic text of Śaivasiddhānta literature. The reference to *liṅga* as being symbolic of sex in the *Śivajñāna-siddhiyār* (supakkam, II. 69) is likely to be a concession to the popular thought identifying *liṅga* with the sex symbol. Even in the *Siddhiyār* there is another line of thought which defines Śakti as being of the form of *jñāna* (wisdom) (I.62), and suggests that to the wise it will be evident that Śiva is a bachelor and Śakti a virgin (II. 77). Their activities are in the nature of a play or drama for the benefit of humanity. Śiva's real form is different from all the characteristics popularly attributed to him. He pervades everything without identifying himself with anything (II. 70). In Appar's *Tevāram*, Śiva is referred to as *naḍutari* (peg to which cows are tethered) who can be intuited only in one's own heart. It may be suggested that the *liṅga* is but a peg-like mark or symbol representing Godhead.

FOOD AND DRINK IN ANCIENT INDIA FROM PĀNINI'S AṢṬADHYĀYĪ (ANNA-PĀNA)

By VASUDEVA S. AGRAWALA

THE *Aṣṭādhyāyī* supplies evidence for reconstructing an important chapter on the history of food and drinks in ancient India. Food is called *anna*, and the eater of food *annāda* (III. 2.68). The word *bhakta* in the *Aṣṭādhyāyī* has two meanings, (1) food and (2) boiled rice. In sūtra VI. 2.71, भक्ताभ्यास्तदर्थेषु where names of edible articles are meant *bhakta* means 'food in general.' The word in this sense also occurs in the Jātakas (*yāgu-bhattādīni*, Takkala Jāt. IV. 43) and the *Arthaśāstra* (Text p. 118). A servant or wage-earner whose remuneration was given to him daily in the form of food was designated *bhākta* or *bhāktika* in the time of Pāṇini. This phenomenon seems to have been true in the case of agricultural labour. The *Arthaśāstra* says that food and wages (*bhākta-veluna*) were paid to the artisans, but food only to farm labour (*Arth.* Text, p. 118). Patañjali is even more specific: 'The meaning of the root *kṛṣhi* is not restricted merely to the actual operation of ploughing, but it also implies all adjunct efforts by way of providing food (*bhākta*) to labour, seed and bullocks, etc., all of which together contribute to the complete fulfilment of the sense of the verb *kṛṣ* (*Bhāṣya*, II. 330 यदसौ भक्त-बीज-बलीवर्देः प्रतिविधानं करोति स कृष्यर्थः)'. The other sense of *bhākta*, viz., boiled rice is seen in sūtra IV. 4. 100 भक्ताणः which teaches a suffix to denote the name of rice that is good for preparing *bhākta*. *Kāśikā's*

¹From the author's Thesis on 'Pāṇini as a source of Indian history.'

examples भाक्तः शालः and भाक्तस्तण्डुलः show that *bhakta* here stands only for boiled rice, a meaning which it still retains in the word भान in many Indian languages.

Classification of foods.—Pāṇini also gives us an insight into the principle of classifying foods on the following lines. In a short innocent-looking sūtra, which has been the subject of so much controversy, Pāṇini explains the meaning of *bhojya* : भोज्यं भक्षं (VII. 3. 69)

It means that the word *bhojya* is irregularly derived (निपात्यते) in the sense of an edible thing (*bhakṣya*). On this Kātyāyana raised an objection that it was a mistake to use *bhakṣya* as a synonym of *bhojya*, since *bhojya* includes all articles of diet, both solid and liquid, whereas *bhakṣya* denotes only solid food. Kātyāyana suggested that the proper word for Pāṇini to express the general sense of *bhojya* was *abhyapabārya*, fit to be eaten, which conveys an equally wide sense to cover both solid and liquid foods. Patañjali² disagrees with Kātyāyana and defends Pāṇini by saying that in such older examples as *ab-bhakṣa* (one who *eats* water) and *rāyubbakṣa* (one who *eats* air) even non-solid substances occur as the objects of *eating* (*bhakṣaṇa*), and hence Pāṇini's idiom in equating *bhojya* with *bhakṣya* is unobjectionable. All subsequent commentators have accepted Patañjali's liberal interpretation of *bhakṣya* in this sūtra, viz., that it stands both for solid (*khara-viśada*) and liquid (*drava*) foods, e.g., the *Kāśikā* :—इह भक्ष्यमभ्यवहायैमायम्। Dr. Goldstücker, however, raised his voice of dissent against Patañjali and maintained that 'in Pāṇini's time, which preceded

² VII. 3. 69.; *vārttika* भोज्यमभ्यवहायै। *Bhāṣya* : Objection : भोज्यमभ्यवहायै इति यस्तव्यम्। इहापि यथा स्यात्। भोज्यः गुणः। भोज्या यवागूरिति। किं पुनः काण्यं न सिध्यति। भक्षिरयं खरविशदे वर्तते तेन द्रवे न प्राप्नोति।

Reply—तावदयं भक्षिः खरविशद एव वर्तते। किं तर्हि। अन्यत्रापि वर्तते। नयथा। अन्वयः वायुभक्ष इति। (*Bhāṣya*, Vol. III. p. 333.)

the classical epoch, *bhakṣya* must have been used as a convertible term for *bhojya*; while at Kātyāyana's period, this rendering became incorrect, and the sūtra certainly needed a correction (*Pāṇini and his Place in Sanskrit Lit.* p. 97). But it is doubtful if Dr. Goldstücker's statement (भक्ष्य-both solid and liquid food) is true for the whole of the *Aṣṭādhyāyī*. In sūtra, *Bhākṣyeṇa miśrikaraṇam* (II. 1. 35) as read with *Samskṛtam bhākṣāḥ*, IV 2. 16 *bhakṣya* seems to denote solid food only and not liquids; as is evident from the illustration in the Bhāṣya, viz., गुडेन संसृष्टा, गुडसंसृष्टा, गुडसंपृष्टा घाना गुडघानाः । (I. 387), which is accepted by all subsequent commentators, (*Kāṭikā*, IV. 2. 16 : खर विग्रहसम्भवहार्य भक्षामत्युच्यते; see also sūtra II. I. 35). In this particular sūtra *bhakṣya* cannot be said to be strictly synonymous with *bhojya*, if, as rightly argued, *bhojya* included both liquid and solid diets. In contrast to this, there is another sūtra, viz. पल्लसूपशकं मिश्रं (VI. 2. 128) (which must be interpreted with the sūtra भक्षेण मिश्रीकरण) where Pāṇini himself has given both solid (as sesamum and vegetables) and liquid (*sūpa*) articles of food as examples of *bhakṣyas*.

The correct view therefore seems to be that *bhakṣya* has a two-fold sense in the *Aṣṭādhyāyī*, a more general sense to include both solid and liquid foods, as in sūtra VII. 3. 69, and a restricted one for solid food only elsewhere. As for the contention of Dr. Goldstücker (*ibid.*, p. 97) that in the classical language *bhakṣya* is different from *bhojya* and applies to solid food only, we submit the following three examples from Kautilya, where exactly as in Pāṇini both meanings prevail side by side :—

- (a) *Māṃsa-surā-bhakṣya-bhojana*. (*Arth.* Text. i.e., eating of meat (*bhakṣya*) articles and drinking of liquors (*surā-bhojana*)).

(b) *Sūda bhakṣakāro vā . . bhakṣa-bhojanam yācet* (P. 239), i.e., a cook or sweet-maker may request for some *bhakṣa* and *bhojana*.

(c) *Bhakṣyeṣu smarati* (p. 252), i.e., the king remembers (that courtier) while taking his *food*.

In the above extracts (a) and (b) distinguish between the meanings of *bhakṣya* and *bhojya*, while (c) uses *bhakṣya* as synonymous with food in general. It is this latter sense that is applicable in Pāṇini's sūtra VII. 3.69.

Various methods of Preparation.—

(i) *Misrīkaraṇa*. Preparation of mixed dishes. Some of them as mentioned by Pāṇini were *palala* (pounded sesamum), *sūpa* (pulse juice), and *sāka* (vegetables) with which were mixed relish-giving articles like *ghṛta*, *guḍa*, etc., According to *Kāśikā's* gloss on VI. 2. 154 मिश्रं चानुपसर्गमसन्वौ *guḍa*, *tila* and *ghṛta* were examples of mixing (*misra*) articles. Suitable new combinations with the principal *bhakṣya* foods were coming into vogue.

(ii) *Samśrṣṭu* (IV. 4. 22). The sūtra *Samśrṣṭe* provides that the suffix *ṭhak* is added to a word when the sense is 'dressed therewith.' According to Pāṇini himself *cūrṇa*, i.e. wheat flour (IV. 2. 23) *lavaṇa*, salt, (IV. 2. 24) and *mudga* pulses (IV. 2. 25) were ingredients used 'in dressing therewith.' Kātyāyana perhaps too subtly, thinks that there is something wrong in salt being considered as a 'dressing' article since it is a quality (*guṇa*) being one of the six *rasas* (tastes). (Cf. Kātyāyana on IV. 4. 24 ; II. 330). But Pāṇini considers salt not so much as an abstract quality as a *pañya* or saleable article cf. *lāvanika*, a dealer in salt sanctioned by sūtra IV 4. 52.

(iii) *Vyañjana and Upasikta*. Whereas *misra* articles include condiments the mixing of which depends on the option of the user for flavouring his food,

vyāñjanas or seasoning ingredients were those without which the preparation of a particular dish would be considered incomplete or deficient in taste. According to Pāṇini the purpose of *vyāñjanas* was that of *npasecana* (seasoning for improving taste, IV. 4. 26, *vyāñjanairupasikte*. Patañjali on II. 1. 34 (*Annena vyāñjanam*) treats *dadhi* as an *npasecana* and *Kāśikā's* gloss on Pāṇini II.4.12 gives curds and *ghṛta* (*dadhi-ghṛtam*) as examples of *vyāñjana*. The nature of any dish determines whether a particular article bears to it the relation of a *vyāñjana* or *misri-karaṇa*, i.e., an indispensable or optional ingredient of mixing ; for example, *Kāśikā* treats *ghṛta* both as a seasoner and as a *misru* article (*Kāśikā* on VI.2.128 and 154).

(iv) *Samskṛta*. This method of preparing articles of diet is dealt with in the following sūtras :

(a) संस्कृतं भक्षः IV.2.16.

(b) संस्कृतम् IV.4.3.

According to Patañjali *samskṛta* is that which can be eaten direct from the place of its preparation, as the groats ground in a hand-mill are ready-made (*samskṛta*) since they can be consumed directly without needing to undergo any further processing. But we cannot speak of barley as being made *samskṛta* in the pounding mortar since they require further boiling or steaming (*Bhāṣya*, II.307 ; IV.3.25). As an example of the former *Kāśikā* gives sweet bread baked in an oven (*Bhrāṣṭra apūpa*, IV.2.16).

In Pāṇini's time ready-made foods (*samskṛta bhakṣas*) were named on the basis of (1) their manner of cooking and (2) their principal ingredients. His own example of the former is meat roasted on spike (*sūlya māṃsa*) or anything made in a frying pan (*ukhya*). Of the latter he mentions curds (*dadhi* IV.2.18), butter milk, i.e., curds after separation of butter (*udasvit* IV. 2. 19) and milk (*kṣīra*. IV.2.20) as dressing ingredients. Of the different kinds of gruel,

the one prepared in milk was called *kṣaireyī Yavāgṇ* to distinguish it from the other one prepared only in water. These sūtras also show the extensive use of milk products in the dietary of the people, and together with the numerous other references in the sūtras bearing on cow-economy they hint at a flourishing dairy industry.

Food Products.—A list of the principle food products and their preparations mentioned in the *Aṣṭādhyāyī* is given below :—

A. *Grains.*

(i) *Śālī* (V.2.2.).

(ii) *Mabāvrīhi* (VI.2.38). It was one of the finest variety of rice mentioned by Caraka in his list of the principle kinds of rice (*Caraka*, Nidānasthāna, IV. 6). Suśruta mentions *Mabāśālī*. (Sūtrasthāna, 46.7), which was probably kindred with *mabāvrīhi*, as a native of Magadha. Patañjali speaks approvingly of the *śālī* rice grown in Magadha (तानेव शालीन् भुञ्जमहे ये मगधेषु, I. 19.). The variety seems to have survived for more than a thousand years. According to Hiuen Tsang's testimony : ' There is an unusual sort of rice grown here (Magadha), the grains of which are large and scented and of an exquisite taste. It is specially remarkable for its shining colour. It is commonly called "the rice for the use of the great." (Beal, *Siyuki*, II. 82). This appears to be the rice called *Mabāśālī* and *Sugandhika* (Julien) Hwui Lih, the biographer of the Chinese Pilgrim, states that the *Mabāśālī* rice was grown only in Magadha and that Hiuen Tsang, during his stay at Nālandā, was entertained with this superior kind of rice (*Nalanda* by H. D. Sankalia, pp. 192-3). Pāṇini's acquaintance with the *mabāvrīhi* rice of Magadha reflects another touch of his close knowledge of the Prācyā country.

(iii) *Hāyana* (III.1.148) a kind of *vrīhi*, is also included

by Charaka³ amongst the nine varieties of well-known rice. 'In the *Kāthaka Sāṃhitā* and the *Śatapatha Brāhmaṇa* the term appears as a designation of a species of red rice' (*Vedic Index*, II. 502).

(iv) *Yavaka* (V. 2.3.). Both Pāṇini and Caraka mention *yavaka* as the name of a rice. Pāṇini V.4.3 mentions in the *gaṇapāṭha*, *yava vr̥ṣiṣu*, from which we get *yavaka*. The same *gaṇa* also contains *Jīrṇa śālīṣu*, from which we get *Jīrṇaka* as a kind of rice, probably the same as *jūrṇa* in *Caraka*, Sūtra-sthāna, XXVII.18.

(v) *Śaṣṭikā* (V. 1.90). So called because it ripened in sixty days ; one of the best variety according to medical authorities (*Caraka*, Sūtra, XXVII.13).

(vi) *Nīnāra* (III.3.48), wild and inferior variety.

Pāṇini refers to a river called *Devikā* (VII.3.1) on which Patañjalai remarks that a special kind of rice was grown near the banks of the *Devikā* called *Dāvika-kāla Śālī* (III. 316)*.

2. *Pulses*. *Mudga* (IV.4.25) ; *Māṣa* (V.1.7 ; V. 2.4) ; *Kulattha* (IV. 4.4., *Dolichos uniflorus*, given as an article to be eaten with food (*sauṃskāṛaka dravya*). *Caraka* enumerates *kulattha* among pulses (*Śamīdhānya*, sūtrasthāna, XXVII. 26).

3. *Other Grains*. *Yava* (barley, V.2.3.) ; *Yavāni* (inferior kind of barley, IV.1.49) ; *Aṇu* (V.2.4) a small grain (*Panicum miliceum*) which is the principal food of the poorer people in the Sindh-Sagar doab and other parts of

³ हायनक-यवक-चीनकोहालक-नैषधेत्कट-मकुन्दक-महायीहि-प्रमोदक-सुगन्धिकानां नवानाम् Also Sūtra-sthāna, XXVII.12, where the name is *bāyana* as in Pāṇini, not *bāyanaka*.

*The *Devikā* was the old name of river Deg flowing through Sialkot, Gujranwala and Sheikhupura districts (ancient Madra). On its banks is still grown an excellent variety of rice, known to the modern Panjabi as the rice from Kamoke in Gujranwala and Muridke in Sheikhupura. I owe this information to Prof. Jagannatha of Lahore. Cf. J.U.P.H.S., Vol. XVII, Pt. II, pp. 76-79.

the Puñjāb ; *Gavedhukā*⁴ (IV.3. 136), *Coix barbata*, boiled with rice or barley in preparing gruel ; *Tila* V. 2.4 ; 7). B. Prepared Food (*Kṛtānna*).

(1) *Odana* (IV.4.67.), boiled rice, also called *bhakta* (IV.4.100), must have been a favourite diet, since as many as six varieties of rice are given in the *Aṣṭādhyāyī*. According to Pāṇini some varieties were considered specially good for preparing *bhakta* (IV.4.100). *Odana* was either boiled alone in water, called *udakodana* or *udodana* (VI. 3. 60), or prepared in combination with meat (*māṃsodana*, VI.4.67). Vegetables and soups (*śāka*, *sūpa*, VI. 2. 128) seem to have been other ingredients eaten with boiled rice. Charaka giving a list of thirtyfive kinds of rice prescribes the use of *ghṛta*, *taila*, *phala*, *māṣa*, *tila* along with *odana* (*Sūtras-thana*, XXVII.257). In India *odana* is most commonly eaten with *sūpa* of various pulses. According to the *Mahaummaga Jātaka*⁵ the food of a labourer consisted of *bhatta* from barley eaten with *sūpa*. According to Patañjali *odana* made a decent dish to feast Brāhmaṇas (I.467) and friends (I.182). He repeats several times the phrase, *Vindhyo vardhitakam*, (I. 327), comparing humorously the heap of rice served on a plate to Mount Vindhya.

Bhāṣya. I. 220, *Ekasca taṇḍulaḥ kṣutpratigbātesamart-bas tat samudāyaśca vardhitakam samartham*. The sight of *Vindhya vardhitaka* is a phenomenon of daily occurrence in the eastern districts where rice is the staple food.

⁴ Kātyāyana considered the reading of *Gavedhukā* in the Bilvādi gaṇa (IV.3.136) as authentic (*Bhāṣya* II. 323). The same gaṇa also contains *godhūma* and *masūra*.

⁵ Cf. *Mahaummaga Jātaka*, Vol. VI. p. 372 : *mutthim mutthim kaṭva appasūpam yava-bhattam bhūñjamānam*. Cf. also *Jāt* Vol. I. p. 486 describing a *bhatta* of inferior rice for poor men (*taṇḍula--maṇassa bhattam*).

(2) *Yavāgū* (IV.2.136) Barley-gruel was a popular food like *odana* as can be gathered from its repeated mention in the illustrations to sūtras. The Jātakas mention *Yāgu* as a popular food. Patañjali considered *yavāgū* a liquid diet (Bhāṣhya on VII.3.69). Pāṇini specially mentions the *yavāgū* eaten in the *Sālva* country (*Sālvikā Yavāgū*) which like the breed of *Sālva* bulls enjoyed much wider reputation (IV.2.136 *Go-yavāgvoṣa*). The ancient *Sālva Janapada* consisting of a confederacy of six members states most probably coincided with the vast territory stretching from Alwar to Jodhpur in Rajputana. People in these parts are still inordinately fond of eating gruel, which is of two kinds, viz., (1) *lapsi*, that is sweet in taste and eaten by the rich, and (2) *rābari*, that is saltish and prepared by the poor. Pāṇini also mentions *usbhikā* in sūtra V. 2. 71 as a *samīna* word, which according to Kāśikā was the name of a *Yavāgū* of a very thin consistency. (*Alpānnā yavāgūniṣṣṭhiketyucyate*). In sūtra III. 2. 34 Pāṇini derives *nakham-pachā*, 'nail-scathing.' Kāśikā connects *nakham-pachā* with *yavāgū*. We know from other sources that *yavāgū* was of two kinds, *peyā* and *vilepī*. The *peyā* or thin variety was drunk like *saktu* dissolved in water, while *vilepī* or paste-like *yavāgū* was licked with fingers of the hand. The *usbhikā* in sūtra V. 2.71 must be the *peyā* variety whereas the *nakham-pachā* kind of *yavāgū* of sūtra III. 2. 34 was *vilepī* which scathed the finger ends when eaten hot.

(3) *Yavaka* (V.4.29). Patañjali throws welcome light on the preparation of *yavaka*. According to him *yavaka* was made first by pounding barley with pestle and mortar to remove the chaff, and then boiling the pearl-grains in water (or in milk with sugar added to it). Caraka rightly calls *yavaka* a steamed food (स्विन्न भक्ष्य Sūtra-sthāna, XXVII. 259). The Arthaśāstra

lays down that prepared *yavaka* must weigh twice the original quantity of barley given to the cook (Arth. Text. p. 95).

(4) *Piṣṭaka* (IV.3.147). *Piṣṭa* (IV.2.146) denoted the ground paste of any grain; articles prepared by mixing *piṣṭa* were generally called *piṣṭamayam*. *Piṣṭaka* on the other hand was a special preparation, probably the cakes made of powdered rice. Suśruta counts *piṣṭaka* among prepared dishes (*kṛitāṇa varga*) (Food by G. P. Majumdar, Indian Culture, I. 413).

(5) *Samyāva* (III.3.23). Kullūka explains *samyāva* as a sweet preparation made from *ghṛta* milk, *gṇḍa*, and wheat-flour (Manu, V.7), almost the same as modern *curmā*. Suśruta also includes it among confectioneries (Majumdar, *ibid*, p. 413).

(6) *Apūpa* (V.1.4)—sweet cakes of wheat flour and *ghṛta*, a dainty confectionery prepared even now. The Kāśikā mentions oven-baked *apūpas* (IV.2.16). The Cāndra Vṛitti and the Kāśikā read *abhyūṣa* (variant *abhyoṣa*) in the *apūpādi gaṇa*.⁶ It must have been an ancient food since the Kāmasūtra also mentions *abhyūṣa-khādikā* as the name of a game in which boys and girls took part by eating the *abhyūṣa* together (Kamasūtra, ch. IV.).

(7) *Saktu* (VI.3.59). *Saktu* (groats) is a popular food all over north India. Pāṇini mentions *saktu* mixed with water (*udakasaktu* or *udasaktu*), but Paraśjali mentions *dadbisaktu* i.e., groats with *dadbi* as the seasoning ingredient (I.149; I. 1. 57). *Bhrāṣṭra* or the frying-place (VI.2.82) was the place for preparing *saktu*.

⁶ Also *prithuka*, boiled rice, crushed and dried (*cidhuve*), cp. Kāśika, *gṇḍa-prithukāb*, II. 1.35.

Amara: *Apakvam paulir-abhyūṣab*, i.e. half-ripe corn fried in

(8) *Kulmāṣa* (V.2.83.). Pāṇini mentions *kulmāṣa* as a food which was ceremoniously eaten on a particular day in the year (*tadasminnannam prāye sanjñāyam*, V.2.82). The particular full moon on account of its association with *kulmāṣa* was known as *kulmāṣī Paurṇamāsī*.

What was *kulmāṣa*? In the Nirukta⁷ *kulmāṣa* is an inferior food, which is confirmed by the Chāndogya Upaniṣad where the people of Ibhyagrāma (richmen's village) in Kurukshetra eat *kulmāṣa* after the crops had been destroyed by hail storms (I.10.2). The *Kumāsa-piṇḍa jātakā* (No. 415) refers to it as the coarse diet of the poor (*dalidda*) workman which he could carry about in the form of balls or lump, and to which on account of his poverty he could not even add a little oil and jaggery (*atelaṃ, aloṇikam*).⁸ *Kulmāṣa* thus appears to have been a coarse thick gruel of almost solid consistency prepared by stewing beans⁹ or maize, or any inferior grain in covered vessel with a little water (*appodaka*) and adding also *gṇḍa* and fat if one could afford. *Yavaka* was different from *kulmāṣa* in that it was first pounded in a mortar (thus made *aulṇkebala*, Bhāṣya, II, 307) and then boiled like the latter. Caraka also considers *kulmāṣa* as a *svinna-bhakeṣya* steamed food, heavy to digest

⁷ कुल्माषान् चिदाहर इत्यवकुत्सिते Nir. 1.4. Dr. Sarup renders it as sour gruel (Cf. Amara, *kulmāṣa yavaka*; later Koṣas add *Kanjika yavaka*. Also Vedic Index where the meaning of sour-gruel is accepted).

⁸ Jāt. III. 406; on p. 408 *sukkebāya aloṇikāya ca . . kummasapindiyā*. The commentary explains *sukkebāya nisnebāya*, and *aloṇikāya* as *phāṇita nirabitāya*, adding that *alonika* meant *nippbhāṇitattā*, absence of jaggery.

⁹ Kāśikā (also Candra) includes *kulmāṣa* in the *gudādi* group (IV.4. 103) and illustrates it as कुल्माषिक मृद्ग, i.e., मृद्ग pulses suitable for making *kulmāṣa*. Cakrapāṇi on Caraka, sūtrasthāna, XXVII. 260, explains *kulmāṣa* as *yavapiṣṭam uspodakasiktam īṣatsvinnam apṛṇīkṛtaṃ kulmāṣamānuḥ*.

and dry in effect (Sūtra-sthāna, XXVII.259). The *kauṁmāṣī tithi* of Pāṇini most probably coincided with the full moon day of Caitra when some kind of kindred perparation forms the ceremonial food. Kātyāyana refers to the *vaṣakini* day which must be the same as the full moon day of Kārttika when cakes of māsha paste (*vaṣakas*) are eaten as a matter of ceremony.

(9) *Palala* (VI. 2.128). A sweetmeat made of pounded sesamum and sugar or *guḍa*, as illustrated by Kāśikā, *guḍeṁ miṣraṁ palalam guḍa-palalam* (VI.2.128) and *tila-palalam*, i.e. the *palala* food made from *tila* (VI. 2. 135) Its modern equivalent is *tilakuṭa*.

C. *Sweets*. Pāṇini mentions the following sweets :—

(i) *Madhu*, honey from which is derived the general term *madhura* (V. 2.107) denoting all confectioneries. Honey prepared by the common bee is referred to as *keśandra* (IV.3.110) treated as a *samjñā* word.

(ii) *Guḍa* (IV.4.103), molasses, a universal product from sugar-cane juice in Indian villages. Pāṇini's phrase 'excellent for making *guḍa*' (*guḍe sādhu*) refers to some special variety of sugar-cane yielding better quality of *guḍa*. Even now this consideration prevails with the farmers at the time of selecting sugar-cane seed for the next crop. Pāṇini refers to vast sugar-cane plantations as *Ikeṣu-vaṇa* (VIII. 4.5.).

(iii) *Phāṇita*, implied as a counter-example in sūtra VII.2.18 which mentions *phāṇṭa* *Phāṇita* denotes inspissated juice of sugarcane boiled down to thick consistency, a preparation now called *rāb* in which crystallisation sets in after some time of boiling.

(iv) *Śarkarā*, granulated sugar prepared from sugarcane.

D. *Milk Products*, called *gavya* and *payasya* (IV.3.160). The Aṣṭādhyāyī mentions curds, milk and butter-milk (IV.2.18) as occupying an important place in the preparation of food articles.

Dadhipayasī (II.4.14) was an equivalent of modern *dūdba-dabī*. *Phāṇṭa* is given in sūtra VII.2.18 in the sense of 'made without an effort' (*anāyāsa*). The *Kāśikā* understands it as a 'a hot decoction,' but the epithet *anāyāsa* points to the old meaning in the *Śatapatha Brāhmaṇa* (III.1.3.8), viz., creamy butter produced fresh (*ayātayāma*) as opposed to *ghṛta*. A new classical word, *lūiyamgavīna* (Pāṇini V. 2. 23) had come into use, equivalent to *navanīla* or butter produced by churning curds from the previous day's milk, a practice universally followed in the rural ghee industry.

Pāṇini has an interesting sūtra *Pānam deśe* (VIII.4.9) which apart from its grammatical interest (i.e., cerebralisation) acquaints us with the fact that different countries derived their names from the favourite drinks of their people. Of the four illustrations on this the first cited by the *Kāśikā* and repeated in the *Cāndra vṛitti* (VI. 4.109) refers to the people of the Uśīnara country as being fond of drinking milk (*Kṣīrapāṇā Uśīnarāḥ*). The information seems to be grounded in fact. Uśīnara or the ancient Śibi Janapada had its capital at Shorkot near the left bank of the lower Chenab, and roughly corresponded with parts of Jhang, Multan and Montgomery districts famous for their breed of cows.

The *Mahābhārata* mentions *mathita* (whey) as a favourite drink of the people in Vāhika country, and Patañjali refers to *māthitika* shop-keepers selling *mathita* (III. 328, *mathitam paṇyam-aśya māthitikaḥ*).

E. *Vegetables and Fruits*. Among auxiliary articles of food Pāṇini refers to *sāka* (leafy vegetables), cooked vegetables (*bhājī*, IV.1.42; also called *śrāṇā* in sūtra IV.4.67), soups (*sūpa* VI.2.128) which must have been prepared from pulses like *mudga* and *māṣa*. Mention is also made of the practice of munching with food such digestive roots as radish and ginger called *Upadamśa*

(III.4.47). Among fruits mango (*āmraṇa*, VIII.4.5) and *Jambū* (rose-apple, IV.3.165) are mentioned.

Generally the name of the tree was also the name of the fruit (IV.3.163, *Phaleluk*).

Cooking and other customs. Cooking is called *pakti* (III.3.95). Frying-pans were used for cooking (*ukhā*, *ukhya*, IV.2.17). The process of roasting on spikes on referred to as *śilā-karoti* (V.4.65) and articles so roasted were known as *śūṇya* (IV.2.17). The commentators in both the sūtras understand this process to apply only to meat. Pāṇini explicitly refers to *māṃsa* in sūtra IV.4.67. Kāṭyāyana also mentions shops of meat-sellers (*pakva-māṃsika*, p. 144). They must be preparing *śūṇya* articles of food.

The cooks in the time of Pāṇini derived their designations from two factors, firstly from their skill in preparing particular dishes, and secondly from the quantity which they were capable of cooking. The first point is referred to in VI.2.129, in which the names of various classes of cooks are presumed, as *deva-sūda* and *bhājī-sūda*, i.e., cooks attached to temples and persons who were expert in the cooking of vegetables.¹⁰

The practice of designating cooks on the basis of their capacity to cook a particular measure or quantity of food is referred to in sūtra V.1.52. (संभवत्यवहरति पचति) This may have been a criterion to determine their wages and worth for employment in domestic and army kitchens. Pāṇini himself speaks of those who were capable of cooking an *āḍbaka*, *ācila* or *pātra* measure and therefore distinguished as आढकीन, आचिनीन and पात्रीण respectively (V.1.53). Kāṭyāyana in a special vārttika refers to the cooking of *droṇa*-measure from which a female competent to cook so much was known as *drauṇī* or

¹⁰ Cf. Artta. Text, p. 239, referring to *sūda* and *bhaksakāra* rendered as sauce-maker and sweetmeat-maker, respectively. The Kāśikā understands *Devasūda* and *Bhājīsūda* as place names.

drauṇikī (V.1.52; II.352). Provision is also made for deriving names of cooks on the basis of cooking even higher weights, i.e. *dvyāḍhakī* *dvyāḍhakikī*, *dvyāḍhakīnā* (Part.II.352; V.1.54). The popularity of these epithets is seen from another rule in which Pāṇini gives as many as four variant forms for designating one who could cook a couple of *kulija* measure, e.g., *द्विकुलिजिकी*, *द्विकुलिजीना*, *द्विकुलिजा*, *द्विकुलिजिकी* (V.1.55).

The same principle held good in the case of utensils which were named from the quantity that they could contain (*sambhavati*, V.1.52) as *prāsthika*, *kauḍavika*, *kbārīka*, or that could be cooked in them (*Parimāṇe pacat*, III.2.33). The custom served a practical need in the economy of village life. At the time of communal feasts bigger utensils and jars are borrowed from other families both for cooking and for storage, and then it is found convenient to refer to those vessels by such names.

Customary food payments. The information furnished by the following sūtra is of special interest : तदस्मै दीयते नियुक्तम् IV.4.66. It teaches that the affix *ṭhuk* comes after the name of a food in the sense of 'to whom this is to be given daily by virtue of an appointed custom.'

The word *niyukta* is vital to the discussion. It comes from *niyoga*, which according to Patañjali denoted an obligatory act or payment in respect of another person partaking of the nature of a debt.¹¹ For example, if one had engaged a servant for a *paṇa* a day, the *paṇa* was a *niyukta* charge the payment of which at the end of the day was obligatory, and not optional. We must imagine those circumstances in which an article of food

¹¹*yad-yasya niyogataḥ kāryam-ṛṇam tasya tadbhavati.* (Bhāṣya I. 391; in the course of an explanation of the varttika on sūtra II.1.43).

can become due in a like manner. We read in the Arthasāstra of *bhakta-karmakaras*, i.e., servants engaged on the stipulation of receiving daily food. In the actual village economy there has always existed a custom of giving a portion of the mid-day meal to certain domestic servants and menials, like the scavenger and the water-carrier, etc. Their daily wages in respect of the services rendered by them to the various families consist only of food articles which they are required to collect in the course of the day from the number of houses served. The village Brāhmaṇa also by virtue of his privileged position as Purohita gets a portion called *agrāsana*, which is no doubt referred to in the illustration *āgrabhojanika* (*agre bhojanam asmai niyuktam dīyate*) cited by the Kāśikā. In this case the members of the family cannot partake of their food unless the *āgrabhojana* has been set apart. The point to remember is that the giving of *niyukta bhakṣas* is neither of the nature of alms (*bhikṣā*) nor depends on option, its payment is an obligatory charge. Pāṇini's own examples of obligatory food payments (*niyukta bhakṣas*) are cooked vegetables (*śrāṇā*), meat and boiled rice (*māṃsa, odana*, IV.4.67) and *bhakta* (IV.4.68). A servant whose daily apportioned share consisted of only vegetables was *śrāṇika*, or *śrāṇikī* in the case of a female, and so for meat *māṃsika*, for rice *odanika*, and for *bhakta bhāktika*, the last corresponding to *bhakta-karmakara* of Kauṭilya receiving daily full meal. But the question arises how could vegetables, etc. singly make a complete (*āśitumbhava*, III.2.45) food for a servant who received vegetables or meat only from one house. The reply is that the same person would be a *śrāṇika* in respect of one family, *odanika* in respect of a second, and *āpūpika* in respect of a third. For example a female (*udulārī*) agreed to take vegetables from one house, soup from another, meat and rice from a third and so on,

and thus she earned her complete meal. If she served a confectioner (*āpūpika*) she would naturally receive an *apūpa* a day as her payment for work, and with reference to that particular house she would be called *āpūpikā*, i.e., a female receiving an *apūpa* every day.

Such an arrangement alone could have been responsible for the origin of different designations of servants based on the names of the different articles of food of *niyukta* share. This is a living institution in north Indian villages up to this time where cash payment is practically unknown for domestic and menial service rendered.

Invitations. Pāṇini distinguishes between two kinds of invitations to dinner, viz., *nimantraṇa* and *āmantraṇa* (III.3.161). According to Patañjali the former is an invitation to partake of *bavya* and *kavya* foods, the acceptance of which is obligatory on the invited Brāhmaṇa, and refusal would entail sin. *Āmantraṇa* on the other hand is a friendly invitation and therefore optional (*āmantraṇe kāma-cārah*, II.165).

Among food habits reference is made to fasting (*vrata*, III.1.21), satiety (*subhita*, II.2.11) and gluttony (*audarika*, V.2.67, *ghasmarā*, *admara*, III.2.160).

Taverns and drinks. Urban culture is reflected through several institutions, as shops offering meat and rice (*māmsaudana*), confectioners (*āpūpika*, IV. 4.51), theatrical shows (*prekṣā*, IV.2.80), and performances by various artists (*śilpina*) like the instrumentalist (*vādaka*) musician *gāyana*, III.1.147), and dancer (*nartaka*, III.1.145); but none of them so typically represents the climax of fashionable society as the vintners' (*Śaundika*, IV.3.76) shop or the drinking booth. There is enough material in the *Ashtādhyāyī* to show that not only did people enjoy themselves with indigenous intoxicating liquors of various kinds, but that they were using costly wines imported from distant places.

The following words denote the names of persons and places involved in the production and trade of liquor :

Śuṇḍika—Drinking-booth (IV.3.76).

Śuṇḍika—Vintner do.

Āsuti—Distillery (V.2.112).

Āsutiwala—Disiller do.

These are new classical words unknown in the old *Brāhmaṇa* and *Āraṇyaka* literature. Intoxicating liquor is called *madya* (III.1.100) and liquors in general *sura* (II.4.25). Of special interest is Pāṇini's mention of the *maireya* and *kāipsūyana* drinks discussed below.

Maireya. *Maireya* was a kind of favourite intoxicating drink. The word is unknown in the *Brāhmaṇa* and *Āraṇyaka* literature, which suggests its introduction in the post-Vedic period. The Buddha, however, found the use of *maireya* so common that in order to rescue people from its baneful effects he prescribed an injunction against it. We are indebted to Pāṇini for raising an important discussion about the accentuation of the word *maireya*, and this has incidentally preserved some valuable facts about the nature of this drink.

In the sixth book of the *Aṣṭādhyāyī* occurs the following sūtra : अंगानि मैरेये (VI. 2. 70) 'The first syllable of the word preceding *maireya*, gets the acute when it denotes the ingredient of the same.' It implies that the word *maireya* enters into a compound with words denoting its ingredients, and in such compounds the ingredient-denoting word is acute on the first syllable.

Leaving the particular grammatical point aside, we infer from the sūtra that Pāṇini had a knowledge of the ingredients (*aṅgāni*) of *maireya* liquor. It is not possible to understand the rule properly without having a knowledge of these constituents. Naturally therefore an enquiry into the mixing parts of this drink becomes our first objective.

The Arthaśāstra enumerates six varieties of liquor, viz., *medaka*, *prasannā*, *āsava*, *ariṣṭa*, *maireya* and *madhu* (Arthaśāstra Text, p. 120). Fortunately for us the full recipe of *maireya* is also given by Kauṭilya :

मेवमृगीत्वक् क्वाथामिधुनो गुडप्रतीवापः

पिप्पली-मरिच सम्भारस्त्रिफलायुक्तो वा मैरेयः ।

(Arth. Text. p. 120).

‘Prepare a decoction of *meṣaśṛṅgī* bark, mix it with jaggery and add the powder of long pepper (*pippalī*) and black pepper (*marica*); to it the powder of *triphalā* may be added optionally,—this is the recipe of *maireya*.’

In the above recipe *meṣaśṛṅgī*, *pippalī*, *marica* and *triphalā* belong to one group and *guḍa* to the other. Further light on this division is thrown by the two illustrations given on Pāṇini’s sūtra by the Kāśikā :

गुड मैरेयः । मधु मैरेयः ।

Both these examples refer only to the sweetening content of *maireya*, viz., *guḍa* and *madhu*, and obviously according to Pāṇini’s intention as implied in the sūtra, the word *aṅgāni* refers only to the sweetening ingredients and not to the *auṣadhi* contents used in the preparation of *maireya*, like *meṣaśṛṅgī* and others. It may be rightly inferred that the *auṣadhi* contents of *maireya* must have remained somewhat constant, whereas the sweetening contents could be changed from *guḍa* to *madhu* or to *sarkarā*, etc. The naming of *maireya* would thus depend not on the constant ingredients, but on the sweetening parts subject to change (cf. Kāśikā. मद्यविशेषो मैरेयस्तस्य गुडविकारस्य गुडोऽङ्गं भवति मधुनो मधु ।) For example the customer ordering his *maireya* drink from the master of the booth would not say : Please give me *meṣaśṛṅgī-maireya* or *triphalāmaireya*, but would express his desire for a variety in taste by ordering at different times for *guḍamaireya*, *madhumaireya*, *śarkarāmaireya*, *phāṇitamaireya* and *iṣṭurasamaireya*, etc.

The above varieties of *madhuraraga* mixed with the

decoction of the bark of *mesaśraṅga* and other specified herbs; must have produced a correspondingly low or high quality of drink. Caraka tells us that *maireya* was primarily a *madhura* wine, a drink sweet in taste. The choice of an inferior condiment like *gūḍa* and *phāṇita*, or of a superior one like refined sugar made all the difference in the quality, taste and price of the *maireya* drink. The aristocratic customer in the tavern would order superior grade of wine, and in the case of *maireya* this emphasis would fall naturally on the first part of the compound, i.e., on the word denoting the sweetening constituent and hence the acute accent on it.

The Arthasāstra mentions *gūḍa* as a mixture of *maireya* in the recipe quoted above. It agrees with the example *gūḍamaireya* of the *Kāśikā*. The other example *madhumaireya*, i.e., *maireya* prepared by mixing honey lacks confirmation from the above statement in the Arthasāstra. The question arises as to whether we are on good authority in assuming that other sweetening ingredients besides *gūḍa* were also added to *maireya*.

The answer to this is in the affirmative. In the chapter relating to the duties of the Superintendent of Royal Storehouse, Kauṭilya gives directions for the storage of liquids tasting astringent : ५४२२०

इक्षुरस-गुड-मधु-काणित-जाम्बव-यनसानामन्यतमो मेपशृंगी-गिप्पली ववाथा-
भिषुजो मांसिकः पाणमांसिकः मांसत्सरिको वाचिमिटोर्वह्नेभुकांडाज्जकला मलकावसुतः
शुद्धो वा शुक्तवर्गः ।

(Arth. Text, p. 94).

‘Mixture made by combining any one of the substances, such as the juice of sugar-cane, jaggery, honey, raw granulated sugar, the essence of the fruits of jambu and jack tree,—with the decoction of *mesaśraṅga* (a kind of plant) and of long pepper should be stocked. To this the following may also be added if desired viz., *cirbhita*, cucumber, sugar-cane, mango fruit and the

fruit of *myrobalam*. This mixture should be either one month or six months, or a year old.¹² This constitutes the *sukta-varga*.'

Although in this context Kauṭilya does not actually use the name *maireya* for the liquid recommended for stocking in the royal store-house, the recipe leaves no doubt that high class *maireya* was intended. The *aṇṣadhi* contents are the same, viz., the decoction of *meṣaśṛṅgī* and *pippalī* (*marica* is left out as of minor importance); in the optional group in place of *triphalā* alone, we have greater variety in *āmālaka*, *āmrāphala*, *urvārūka* and *iṅṣu-kāṇḍa*. In the enumeration of the sweet contents in place of *guḍa* alone we have six varieties, of which *madhu* is also one. We can now understand the example *madhu-maireya* given in the Kāśikā on Pāṇini, VI. 2. 70, since honey like *guḍa* was also an *aṅga* or constituent from which the particular variety of *maireya* derived its name; we may also imagine that both *guḍamaireya* and *madhu-maireya* were legitimate, and for the matter of that, ancient illustrations to Pāṇini's rule. The plural number of the Pāṇinian word *aṅgāni* also stands justified from its reference to as many as seven varieties of sweetening ingredients mixed with *maireya*, viz. molasses (*guḍa*) honey (*madhu*), sugar (*śarkarā*), sugar-cane juice (*iṅṣu-rasa*), thickened pastry (*phāṇita*) and sugar of jackfruit (*panasa*) and rose-apple (*Jāmbāra*).

Kāpisāyana. The name of the second important drink is *Kāpisāyana* referred to in sutra IV.2.99 :—

Kāpisāyāb śbphak.

Kāpisāyana and *Kāpisāyanī* derived in the sense of 'produced there' refer to the wine and grape exported

¹² I understand *māsika*, etc., not in the sense of 'to last for a month, or six months, or a year,' but as 'so much old' (i.e. not *bhāvi* but *bhūta*, cf. Pāṇini V. 1.80) since old wines were preferred,

from Kāpiśī. Kāpiśī¹³ is even today the home of the grape. In ancient days an excellent quality of raisin wine was manufactured in Kāpiśī region and widely exported.¹⁴ We are again indebted to Kauṭilya for supplying the clue to the name Kāpiśāyana : 'The juice of grapes is termed *madhu*. Its own native place is the commentary on such of its various forms as *Kāpiśāyana* and *Hārahūraka*.' (Arth. Trans. p.133). Obviously there were two varieties of the grape wine, the *Kāpiśāyana* produced in the region round Kāpiśī in north Afghanistan and the *Hārahūraka* in the south in the valley of the Harahvaiti¹⁵ or Helmand. The black raisins are still called *harabūra*, and it is possible that the *Kāpiśāyana* or northern variety of wine was made from the green and *Hārahūraka* or Gāndhāra wine from the black grapes.

Kauṭilya's sentence, *taṣya svadeśo vyākhyānam Kāpiśāyanam*, supplies the needed commentary on Pāṇini's *Kāpiśāyana* which must have been the name of the reputed wines from that region. That Kāpiśī was an emporium for this class of drinks is also proved by the recent archaeological discoveries at this place of numerous glass flasks, fishshaped wine jars and drinking cups which were used in the wine trade until many centuries after Pāṇini. (Cf. *Excavations at Begram* by Dr. Hackin).

Kaṣāyas. Pāṇini also refers to names of *Kaṣāyas*, or decoctions (VI.2.10, *Aḍvāryu-kaṣāyayor Jātau*) of which

¹³ Kāpiśī is ancient Begram on the confluence of the Ghorband and Panjshir rivers. An inscription in Kharoṣṭhī characters recently found there settles the ancient site of the place. (Dr. Sten Konow, *Kharoṣṭhī Ins. on a Belgram Bas-relief* Ep. Ind. XXII, pl.11).

¹⁴ Cf. Bindusāra requisitioning raisin wine from Antiochos in the 3rd century B.C.

¹⁵ *Harahvaiti* (Avestan), *Harahvati* (O. Persian) San. *Sarasvatī*, also called *Haraquāṭi* (Cf. CH. I. p. 326). It is the modern Helmand (Vedic Index, II. 434; footnote to *Sarasvatī*).

the *Kāśikā* gives several examples. The *dauvārika-kaṣāya*, must have been an intoxicating drink of mild effect specially prepared for the *duavārika* or the chamberlain officer, mentioned in Pāṇini (VII. 3.4) and also in Kauṭilya (Arth. Text. p. 247), whose duties imposed on him the restriction to indulge only in the mildest kinds of drinks.

Besides the above names, the Gaṇapāṭha of V.4.3 (supported both by *Kāśikā* and Candra) includes *kālikā* and *avadāikā* as names of special liquors. *Kālikā* must be the same as *kālika surā* in Kauṭilya (Arth. Text. p. 119) and *avadāikā* might be but another name for *sveta-surā* of the Arthaśāstra p. 121, which was also called *prasannā* (cf. *Kāśikā* on V. 4. 14). Kātyāyana refers to *sīdhu* in a *vārttika* on II. 2.8.

Distillation. In the distillery (*āsuti*, V.2.112), ingredients were first prepared into a ferment (*kiṇva*); and when fermentation had advanced to the requisite stage, they were termed *āsavya* (III.1.126), literally 'that of which the distillation has become imminent' (*āvatyaka*). The sediment or refuse (*kalka*) left after distillation was termed *vinīya* (III.1.117), a technical word in the vintner's vocabulary, literally meaning that 'which is fit for removal.' According to Kauṭilya women and children could be employed for removing the *surā-kiṇva*, or fermented dregs (Arth. Text p. 121).

Another expression originating in the language of the drinking booth¹ was *kaṇe-batya* (*pibati*) regularised in sūtra I.4.66, which corresponds to the English phrase 'drinking to the lees.'

SO-CALLED GEOGRAPHICAL AND ASTRONOMICAL EVIDENCE TO THE MAHABHARATA PROBLEM

By P. R. CHIDAMBARA IYER

MR. V. B. Athavale, Professor, Nasik College, has contributed a series of articles to *the Journal of the Ganganatha Jha Research Institute*, in which he claims to have brought in some new Geographical, or what I would prefer to call seismological, as well as Astronomical evidence to prove what he conceives to be the date of the Bharata War and the *Gītā*. As an astronomer with 20 years' past connection, in no mean capacity, with an institution like the *Kodaikanal Observatory*, I became naturally interested in both the classes of evidence. On going through the author's citations and arguments, however, I felt that I would be failing in my duty, if I allowed the several misconceptions to pass current in a responsible journal in which the articles have found publicity.

On page 204, Vo. I Pt.2, Mr. Athavale says :—

“(1) if the description of the earth disturbances on a vast scale be true we may expect a (?) simultaneous and similar effects in the same latitudes. For instance, the latitude of Delhi is 30 and that of Basra is the same. (2) But Basra being near the sea due to the earth disturbance a big sea wave is sure to rise and produce a deluge in the plane tract, the effect being similar to that at Dwārakā.”

It cannot be surmised how and wherefrom the author got the notion that places in the same latitudes are simultaneously and similarly affected by earthquake disturbances in any one place. So far as is known, there is nothing in seismology to support this assumption. It is well known that earthquake waves have a three-dimensional propagation in all directions from the origin or focus inside the earth and that even very moderate shocks are recorded

by seismographs all over the world owing to the disturbances reaching and affecting the instruments. The class of large waves, known as free waves, which travel along the surface of the earth and which do all the damage in an earthquake also travel in all directions outward with reference to the epicentre, a point or area vertically above the focus. It cannot even be said that the disturbances travel more easily or quickly in the direction of latitudes than along other directions. In the face of these facts, when the author later on, page 207, says, "It can also be shown that Mexico in America in the same latitude as Dwārakā had also been disturbed simultaneously," he is certainly spinning out a fairy tale and not presenting any arguments based on the known facts and laws of science. The only explanation for this misconception seems to be that the author, from constantly seeing in the school maps the surface of the globe marked by latitudes and latitudinal zones of climates, etc., has, probably, erroneously imagined that the interior of the earth has also got stratified in latitudinal belts of homogeneous structure and that therefore disturbances starting in one belt travel more easily along the same belt than in other directions.

Now coming to the statement marked (2) in the paragraph quoted above, if every earthquake were to produce a huge sea wave, then humanity would have long ago ceased to live, or would not have begun to live at all, in coastal towns. But, luckily, the author's idea is chimerical. Only when an earthquake originates at the bottom of the sea and a subsidence or uplift of a considerable area of the sea floor takes place, thereby displacing a huge volume of water above it, does a seismic sea-wave or a tidal wave, as it is popularly called, arise of the magnitude to produce disaster on coastal towns and low lying regions beyond. But according to the author, "the epicentre of the earthquake must have been in the part of the Himalayas near Hastināpur." Then

where is the question of a sea wave to destroy Dwārakā and much less to produce the Biblical flood?

With regard to the flood itself. If the *Mahābhārata* is the authority for the Hastināpura earthquake, the Holy Bible is no less the authority for the flood. Genesis, chapters 6, 7, and 8 give all the information about it. I find that there is not even the remotest hint of an earthquake as the cause of the flood. God did not say "I will shake the earth to its very foundations and raise the waters of the deep which will swallow up the whole land and destroy man and all created beings." On the other hand what the Lord did say was "I will cause it to rain upon the earth forty days and forty nights; and every living substance that I have made will I destroy from off the face of the earth." And Genesis continues "And the rain was upon the earth forty days and forty nights." So it was all a fresh-water business, and true to this the 8 feet thick deposit on which Mr. Athavale relies so much is laid by fresh-water and not by sea-water. It is clear that the Lord even in such a wrathful mood did not think of producing an earthquake. The Babylonian tablet which the author quotes also confirms this. For it reads "Six days and nights raged wind, deluge and storm over the earth. When the seventh day arrived the storm ceased. Hedges and fields had become like marshes . . ." So evidently the cause of the Biblical flood was purely meteorological and not seismic at all. It is strange that the author, discarding the purport of the authorities he himself cites, goes on making assertions suited to his own fancy.

As for the fate of Dwārakā, it is well known that the Cutch region is constantly subject to tectonic forces. For example, on page 60, *Earthquakes and Volcanoes*, Benn, we find stated that "the irregular tilting of a wide tract of country was caused by the earthquake of June 16, 1819, in Cutch; the country to the north was uplifted twenty feet, while to the south the land sank ten feet." In a

similar way, the land on which Dwārakā stood might have gone down causing the town to be deluged by the sea. It is fantastic to seek to establish a connection between this and the Biblical flood.

In his paper entitled "The Exact Date of the Kuru War" Vol. III, Pt.1, the author claims to have clinched the date of the War by means of astronomy. For this purpose, however, he has, as the very opening sentence shows, put his entire reliance on two dubious factors, namely his own distortion or convenient misunderstanding of a plain and unmistakable statement in the Epic and the mention of a comet in Puṣya. I shall take the comet first.

How many comets were there? In the verse

उमे पूर्वापरे सन्ध्ये नित्यं पश्यामि भारत ।

उदयास्तमने सूर्ये कवन्धैः परिवारितम् ॥

Bhīṣma 2-20

Vyāsa says that every day he was seeing the sun, at setting and rising, surrounded by comets. In the *Rāmāyaṇa* we have a graphic description of a day-light comet in कवन्धैः परिघाभासो दृश्यते भास्करान्तिके. So there is no mistaking कवन्धैः for anything else. Then we have the direct mention of a fearful comet occupying Puṣya. In the line श्यामो ग्रहः प्रज्वलितः सधूम इव पावकः, verse 16, the phrase सधूम इव पावकः is taken by some to be indicative of a comet. So how many comets are we to understand by all these references? Even ignoring those seen near the sun at sunrise and sunset as being faint objects, there must be two bright and fearful comets, one in Puṣya and the other in Jyestha. The author himself has noted these two references. But since two comets are inconvenient to him, he says in footnote 13, page 21, that the first gives the position of the star in the head, and the second gives the extent of the tail, of the comet. He has bypassed the situation by fusing the two into one comet, and, the angular distance between Puṣya and Jyestha being nearly 120

degrees¹, he 'proves' that the comet was very big. Unluckily, however, he has thereby committed himself to a very palpable absurdity.

In the months Aśvina and Kṛttikā, the sun must be somewhere in the signs Virgo to Scorpio. It has evidently not occurred to the author that the tail of a comet has the peculiar idiosyncrasy of always pointing away from the sun. So with the sun in that position it is not possible for any comet to extend between Puṣya and Jyēṣṭha. If the head or nucleus be in Puṣya, the tail has to be in the opposite direction through the signs Gemini and Taurus, and if the nucleus be in Jyēṣṭha, the tail must lie along Sagittarius and beyond. Astronomers know this from actual observations and those of the general public who have seen the last apparition of Halley's Comet in 1910 can easily recall to their minds how the enormous tail used to extend away from the sun, both when approaching it and receding from it. But Mr. Athavale has 'proved' that this comet of the *Mahābhārata* lay with its nucleus in Puṣya and the tail extending towards the sun and past it to Jyēṣṭha in the celestial sphere.

Granting, however, that the *Mahābhārata* does refer to a real comet, it might have been any great periodic comet or a new one of parabolic or hyperbolic orbit which appears only once never to return again. But the author insists on identifying it with Halley's Comet. For this he adopts 77 years as its period and makes it a question of simple arithmetic to find its year and the (whatever it means) place of appearance, in face of the fact that to a professional astronomer the calculation of a comet's orbit is a ticklish job. How difficult and uncertain it is can be seen from the remarks of Prof. R.A. Sampson, Astronomer Royal for Scotland, in the section Astronomy in *An Outline of Modern Knowledge*,

¹ From old observations of Halley's Comet published in the 1910 issues of *Nature*, I find that the maximum length, observed, of the tail of the Comet was only 43 degrees. But this itself is enormous, as it will cover a sign and a half of the zodiac or half the distance between the zenith and horizon.

Gollancz, page 118. He says "The most famous² of all the comets is Halley's, which recedes considerably beyond the orbit of *Neptune*, and revolves in a period of about 75 years, a period that varies according to chance encounters with the planets. Its return cannot be identified to a matter of five years without taking account of such perturbations." And yet the author takes the interval between 1910 and 3016 and divides it by 77 and says that the comet is visible !

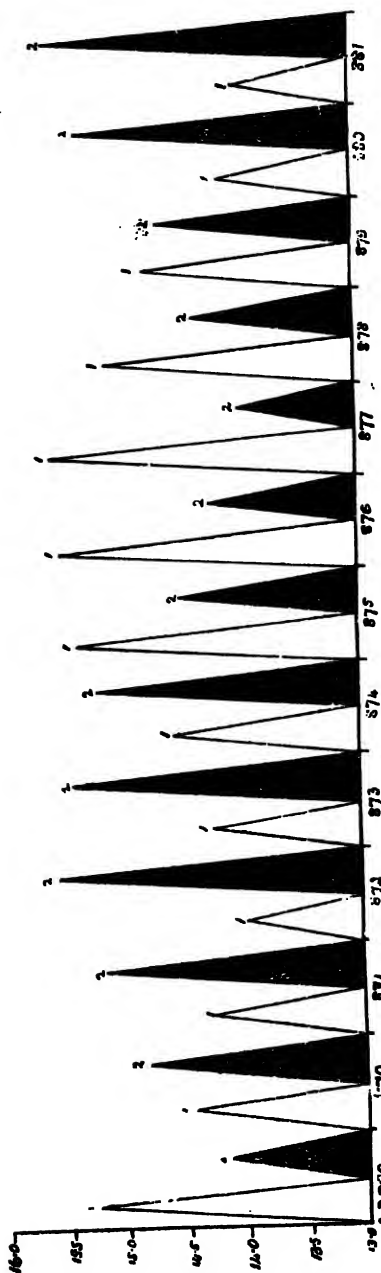
In order to 'prove' the fall of meteors and fireballs mentioned in the *Mabābbārata*, the author makes such a glib statement as this : page 21, "When the earth is passing through the tail of a comet, the meteor showers occur. This coincidence corroborates the correctness of the statement." I regret to remark that the temerity of such a statement is surpassed only by the ignorance it betrays. He has assumed that every time a comet, or at least Halley's comet, appears, it is the inevitable business of the earth to pass through its tail and that it is a comet's tail that drops down to the earth meteors and meteoric swarms. It is only just a probability that in April 1910 the earth was momentarily involved in the tail of Halley's comet, but even then the tail is such a tenuous affair that it could not have penetrated even the rarified upper layers of the earth's atmosphere. Any book on astronomy will show that meteors cannot originate from such a gaseous thing as a comet's tail.

I may now turn to the author's view of the two eclipses at 13 day's interval. While the statement in the Epic is clear and everyone of the workers has understood it to mean that an *Amāvasyā* took place on the 13th day with a solar eclipse, the author contends that only the bright fortnight and never the dark can be as short as 13 days, and that 13 day eclipses are always in the first half of the month and never in the second. For this assertion, he gives a

² In the sense that it received the greatest scientific attention and not that it was the biggest or most spectacular.

fallacious reason. He argues that the moon attains 180° from the sun sooner than when it overtakes the sun to Amāvasyā. On this score he should not have misinterpreted the text to mean that it was the solar eclipse of Āśvina Amāvāsyā that was followed in 13 days by the lunar eclipse of Kārtika full moon. For since the sun and moon are moving in the same direction in the celestial sphere, it is the relative motion of the moon with respect to the sun that makes the fortnights. Theoretically the two fortnights must be equal, since to create or annihilate a difference of 180° in longitude it must take the moon an equal amount of time, the mean motion of the moon minus the mean motion of the sun being constant year after year. But actually there is a difference in the fortnights, owing to the fact that neither the sun nor the moon moves through all parts of their orbits at any constant rate. As the two, however, form a cyclical system, it is impossible for this difference to be always on one side. It must be equally balanced between the two fortnights. In order to show how this operates, I have worked out from the *Indian Ephemeris of L. D. S. Pillai* the lengths of the bright and dark fortnights of the Kārtika month for 13 years beginning at random with the year 869 A.D. The values are shown below :

A.D.	Year.	Days in Br. half.	Days in dark half.	A.D.	Year.	Days in Br. half.	Days in dark half.
869		15.28	14.18	875		15.36	14.50
870		14.49	14.82	876		15.50	14.22
871		14.28	15.17	877		15.56	13.98
872		13.97	15.59	878		15.08	14.34
873		14.26	15.45	879		14.76	14.67
874		14.57	15.21	880		14.12	15.34
				881		13.99	15.59



Lengths of the Bright and Dark Fortnights in Kārika Month from 869-881 A.D.

White cones = Bright Fortnights. Black cones = Dark Fortnights.

Heights of cones = Lengths in days.

The same values are also graphically represented in the accompanying diagram. It is interesting to see how the difference in the fortnights goes on manifesting first on one side and then on the other, by gradual transition, with an obvious 5-year cycle. In the year 3016 B.C., which is the year of the War according to Mr. Athavale, the first fortnight of the Kārtika month has 14.759 days and the second 14.643 days, against his own thesis of shorter first half.

The Saros period is not a sure guide to fix the appearance of eclipses in past years or future, especially when the period of time involved is in thousands of years. The author says that by working backwards by the Saros rule, he tried to find out the year in which the two eclipses separated by 13 days should occur in October and in the third millenium which he got by his much vaunted Geographical evidence. He also gives a simple rule, page 25, to find out whether a solar eclipse occurs or not in any particular year. Not only he but other workers also rely on this. Eclipses of course do occur for a long time at the indicated periods, but the question is whether they will occur in India. No eclipse will occur at the same place and time at any subsequent appearances. There is a slow change in solar eclipses by virtue of which they work round the earth like the thread of a screw from one pole of the earth to the other, the whole period taking about 1200 years. Every 54 years they appear in nearly the same longitudes but then they are either in a higher or lower latitude according to the direction in which they are progressing. For instance the total solar eclipse of 1734 which appeared in India right across the peninsula from Bombay to Madras provinces, appeared at the next occurrence near the Himālayas in 1788, in central Asia in 1842 and in northern Siberia in 1896, that is, in a period of 162 years. To place reliance on this method for finding out an eclipse which occurred or not in 3016 B.C. is mere moon-

shine. Besides a check on the position of Rāhu in that year makes it impossible for the eclipses to occur in Āśvina or Kārtika. The longitude of Rāhu in 3102 B.C. the beginning of Kali Yuga was 201.6952 degrees according to the *Indian Ephemeris* page 335. Even a rough calculation will show that in 3016 B.C. it will be in the sign Kumbha, but on the Kārtika Paurṇamāsī day its longitude was actually 26.16 degrees in Kumbha. This settles the question of the eclipse in Āśvina or Kārtika, as I hope Prof. Athavale will see, much better or more directly than his Saros method.

DO THE REFERENCES TO THE YAVANA INVASION
OF INDIA FOUND IN THE YUGAPURĀṆA, PATAÑ-
JALI'S MAHĀBHĀṢYA AND THE MĀLAVIKĀ-
GNIMITRA FORM THE EVIDENCE OF ONE SINGLE
EVENT ?

By N. N. GHOSH

THIS paper is focussed on the suggestion made by certain scholars that the reference in the *Mālavikāgnimitra* to the Śuṅga-Yavana battle on the bank of the Sindhu provides supplementary evidence to that in the *Yuga Purāṇa* and Patañjali's *Mahābhāṣya* of the same event, namely, the Yavana invasion of India in the time of Puṣyamitra Śuṅga ending in the siege of Pāṭaliputra in the first phase and in the battle of the Sindhu in the next under the same leader.¹ This paper purposes to show that the Yavana invasion mentioned in the *Yuga Purāṇa* and the *Mahābhāṣya* which ended in the siege of Pāṭaliputra was a different event and separated by a long period of time from the Yavana battle on the bank of the Sindhu, that the two battles were fought under separate Yavana leaders and that the references in the *Yuga Purāṇa* and the *Mahābhāṣya* cannot be mixed up with that in the Kālidāsa's drama as the evidence of one common event. References of the Yavana wars in India in the second century B.C. during the reign of Puṣyamitra Śuṅga are found in the Greek writings of the first century B.C. and first century A.D. as well as in the Indian literatures of the second and first century B.C. and in the Sanskrit drama *Mālavikāgnimitra*

¹ Rapson, *CHI*, Vol. I, p. 544 and p. 551 ; Ray Chaudhuri, *PHAI*, 3rd Edition, p. 259, p. 267.

about whose date scholars differ between the first century B.C. and fifth century A.D.²

The Greek writers give prominence to two names—Demetrius and Menander—among the conquerors of Indian kingdoms. But the Indian literatures do not name the Yavana leader or leaders who made Indian conquests.

The earliest reference is made in Patañjali's *Mahābhāṣya* (200 B.C.): *Arunad Yavano Sāketam, Arunad Yavano Madhyamikām*. That is, the Bactrian Greeks were besieging Sāketa (Ayodhyā) and Madhyamikā (Chittor).

Patañjali was a contemporary of Puṣyamitra Śūṅga. There is a passage in the *Mahābhāṣya* which states—*iva Puṣyamitram Yājñāmah*: “here we perform the sacrifices for Puṣyamitra.” The use of the present tense to denote an action which has been begun but not finished shows that the author of the passage was a contemporary of Puṣyamitra for whom he was officiating in the sacrifice. A passage in the *Yuga Purāṇa* of the *Gārgī Samhitā* (c. 1st. Century B.C.) refers to the Yavana invasion of Sāketa, Pañcāla and Mathurā and the siege of Pāṭaliputra. The passage is as follows: *Tataḥ Sāketamākrantaḥ Pañcālāmathurām tatbā, Yavanāḥ duṣṭavikrāntāḥ prāpsyanti Kusumadhvajam*:

“Having invaded sāketa (Ayodhyā), Pañcāla and Mathurā the Yavana (Chief) will reach Kusumadhvaja (Pāṭaliputra).” The names of the places, arranged according to the poetic flow, are not evidently in geographical order, as I shall show later. The two lines following the above passage indicate that there was a siege of Pāṭaliputra and a fierce battle under the mud walls of the city³. A subsequent

² Among the scholars who claim the earlier date [100 B.C.] are Pandit K. Chaṭṭopādhyāya and Rajabali Pandey. The most prominent among those who argued for the later date [400-500 A.D.] is Mr. V. V. Mirashi.

³ Jayaswal, JBORS, 1928.

passage⁴ in the *Yuga Purāṇa* further shows that the Greeks had ultimately to withdraw from the Middle India⁵ because there broke out a terrible civil war among themselves in their home province.⁶

There is no doubt that the Yavanas referred to here are the Bactrian Greeks. A study of the history of the Bactrian Greeks confirms the truth of the traditions preserved in the Indian literatures referred to above. The Greek Satrap of Bactria, Diodotus I, revolted from his master, the Greek Emperor of Syria about 250 B.C. Since then Bactria remained an independent Greek monarchy and defied the power of the Seleucid empire of Syria, although the house of Diodotus was replaced in Bactria by the house of Euthydemus who killed Diodotus II, son of Diodotus I, about the last quarter of the third century B.C. By 208 B.C. Antiochus III, the Seleucid monarch of Syria, made a determined attempt to recover the lost province of Bactria which he invaded, and ultimately came to terms with Euthydemus, recognising the latter's independence and accepting his friendship which was further cemented by giving his daughter in marriage to Euthydemus' son Demetrius.

Immediately following the treaty with Euthydemus, Antiochus led an invasion to India. Passing down the Kabul valley he found himself in the territory of an Indian *rājā* ruling a kingdom in the country west of the Indus. The Greeks call him Sophagāsenos, (Subhāgasena). The name indicates that he may have descended from the line of Virasena who, according to *Tārānātha* (History of Buddhism, trans. Shiefner, pp. 481) founded an independent western line of the Maurya family, ruling in Gandhāra, perhaps during the reign of Samprati. (C.H.I. Vol. I, pp. 512).

⁴ Lines 40-44.

⁵ *Madhydeste nu stbāryanti yavana yuddhadurmadaḥ.*

⁶ *Āimacakrotthitām ghoram yuddham.*

The invasion yielded no tangible result except a renewal of the traditional friendship between the two houses of the Seleucids and the Mauryas. At any rate, Antiochus was in no mood to emulate the Indian adventure of Alexander the Great and hurried back to Mesopotamia to meet fresh dangers nearer home.

Euthydemus took full advantage of his treaty with Antiochus and of the lessons of the latter's Indian expedition, which having passed unresisted through the former territories of the Maurya empire up to the Indus revealed the weakness of the Indian resistance that could be offered against a properly equipped army. So, the policy of the Greek conquest of India initiated by Alexander, and later emulated with ill success by Seleucos Nikator and Antiochus III, was taken up by Euthydemus. He pushed the frontiers of the Bactrian kingdom southwards until they included the whole of southern Afghanistan. From this vantage position, he cast his longing eyes towards the land of the five rivers and probably ventured the execution of his ambitious design not before 197 B.C., when Antiochus was hopelessly involved in the meshes of the anti-Roman policy which ultimately proved his ruin. His Indian expedition was undoubtedly left in the hands of his son, Demetrius, who had already proved his worth in 206 B.C. when he successfully negotiated a treaty with Antiochus on behalf of his father and married a Seleucid princess. He is described by the Greek writers as 'a comely youth' whose qualities impressed Antiochus. He must have been in 206 at least 17 or 18 years old. So in 197 B.C. he was a full grown young man of 26 or 27 years. Demetrius and Menander are often bracketed by Greek writers as the conquerors of India (Strabo XI, 516). But Demetrius was no doubt the elder contemporary of Menander who survived the former by at about ten to fifteen years (*Infra*). The romantic career of Demetrius has survived in Chaucer's

picturesque description of the 'grete Emetreus, the King of India.' Demetrius must have made himself the master of the Upper Indus Valley and Central Punjab during his father's life time and fixed his capital at Sāgala (Sialkot) which he named *Euthydemia* in honour of his father. The death of his father Euthydemus in 190 B.C. occasioned an interruption in his Indian career. He went back to Bactria to be crowned king at the age of 33 or 34. He could not leave Bactria immediately after his accession to the throne and had to suspend his Indian campaigns for some years. He left his eldest son Euthydemus II as his sub-king in Bactria and appointed his second son Demetrius II, as his satrap to rule the country between the Hindukush and the Indus (Tarn, p. 137).⁷

It is during this final phase of his campaigns in India that he penetrated into the heart of the country as far as Pāṭaliputra referred to in the *Gārgī-Saṃhitā* cited above. The route indicated in the passage is confirmed by Patañjali's *Mahābhāṣya*. It is by way of Chittor, (Rajputānā), Mathurā and Pañcālā (Western U.P.) and Ayodhyā (Eastern U.P.) to Pāṭaliputra. He must have taken the lower Indus route to reach India. The country of the Sauvīras in Sind was first conquered by him. He founded a town there and called it *Demetrius* after his own name, since he was the king now after his father's death. A scholion (Weber, *Indische Studien*, p. 50) to the grammarian Patañjali (p. 146) mentions a town Dattāmitrī among the Sauvīras and says it was founded by Dattāmitra, who is named in the *Mahābhārata* as king of the Yavanas and Sauvīras. A Nāsik cave inscription (Ep. Ind., VIII, 1905-6, p. 90; Ind. Hist. Quart. IV, 1928, p. 743) also refers to the existence of the town of Dattāmitrī in Sind. There is thus no doubt that Demetrius, characteristic of the Greek

⁷ *Greeks in Bactria and India* by W. W. Tarn.

conquerors, founded this *polis* to signalise his victory and also to keep his communications with the rear safe. The region of the Upper Indus was already secure under the rule of one of his brothers or sons. The fact that he called this new Greek *polis* in Sind after his own name shows that this new conquest took place *after* his father's death and his own accession. There is thus no doubt that in his second and final Indian venture he made Demetrias (Sind) his starting place for further penetration into the heart of India which ultimately led to the siege of Pāṭaliputra referred to in the Indian literature which wonderfully corroborates and supplements the Greek accounts of Indian conquests by Demetrius and Menander.

The Greek writers unfortunately do not name the places that Demetrius and Menander conquered in India, how far they entered, and what places they passed through. That information is obtained from the Indian literatures. Demetrius, as argued above, must have started from Demetrias (Sind) and as the geography of the country will show, he had to cross the desert of Rajputana to come straight to Madhyamikā (Chittor). From there he moved up, perhaps following the course of the Carmanvatī (Cambal) which flows within 100 miles of Madhyamikā to reach Mathurā on the right bank of the Yamunā. From Mathurā he crossed the Yamunā to reach the Pāñcāla country. From this point he must have followed the course of the Ganges towards the south for some distance and taken the easterly route to reach Sāketa (Ayodhyā) and then a southern turn to reach Pāṭaliputra. Unfortunately neither the Indian sources nor the Greek sources name the leader of the Yavana invasion of Pāṭaliputra. But a combined study of the two sources leaves little doubt as to the possibility of Demetrius being the leader.

The invasion of Pāṭaliputra must have been timed at a moment when prospects of success were most favourable.

He became king of Bactria in 190 B.C. when his father died. It must have taken a few years—3 or 4 years at the least—before he could leave Bactria after making satisfactory arrangements for its governance and that of the Paropanisadae. His conquests of Sind and the foundation of a Greek Polis there to make the headquarters for further operations into the interior of the country again must have taken considerable time. His conquest of Madhyamikā (Nāgarī, near Chittor) was not an easy task, in as much as he had to fight a most warlike people, the Śibis who inhabited that country. It was followed by the conquest of Mathurā where he must have consolidated his rule, probably putting a general at its head. All these again must have taken a year or two in the least. At Mathurā he must have watched the political situation in Pāṭaliputra when the *compdētā* was successfully carried out by Puṣyamitra Śuṅga in 184 B.C. and timed his march to the imperial city through Pañcālā and Ayodhyā referred to in the *Yuga Purāṇa* and the *Mahābhāṣya*.

According to the Greek sources the leader may be either Demetrius or Menander both of whom have been bracketed together as the conquerors of India. It is, therefore, not a matter of surprise that many European and Indian scholars have differed as to who was the leader of the Yavana forces fighting against Puṣyamitra. Dr. Bhandarkar (*Ind. Ant.* 1911, p. 114) holds that the siege of Pāṭaliputra was led by Demetrius. Dr. Ray Chaudhuri, holds the same view and says that "Menander could not have been the Indo-Greek contemporary of Puṣyamitra Śuṅga. It is Demetrius who should be identified with the Yavana invader referred to by Patañjali and Kālidāsa, one of whose armies was defeated by Prince Vasumitra" (*P.H.A.I.*, 3rd. Ed. p. 267.) Tarn seems to favour Menander as the leader of the Yavana forces invading Pāṭaliputra. Prof. Rapson, like Dr. Ray Chaudhuri, mixes up the refer-

ences in the *Yuga Purāṇa* and Patañjali with that of the *Mālavikāgnimitra* as evidence of the same war with the Śuṅga forces, but differs from Dr. Ray Chaudhuri by ascribing the leadership of the Yavana forces to Menander.⁸ I do not subscribe to the view that Menander led the Yavana forces which having passed through Madhyamikā, Mathurā, Pāṭicāla and Ayodhyā besieged Pāṭaliputra. The mistake of those writers who hold this view is primarily due to the mixing up of the references of the *Yuga Purāṇa* and the *Mahābhāṣya* with that in the *Mālavikāgnimitra*. The earliest date of the siege of Pāṭaliputra by the Yavana forces cannot be fixed before 184 B.C. when Puṣyamitra Śuṅga ascended the throne. Demetrius was then in his full manhood, 40 or 41 years old. Even though in his second Indian expedition, Menander and his brother Apollodotus accompanied him as his lieutenants, it is more than improbable that he should have left the supreme task of invading the imperial capital in the hand of one of his younger and less-experienced captains, instead of leading the forces himself. Apollodotus was probably put in charge of the Greek Polis of Demetrias,⁹ also of Madhyamikā (near Chittor) from where he may have taken the south-western road to conquer Broach (the Barygaza of the *Periplus*) where large numbers of his coins are reported to have been seen in circulation by the author of the *Periplus of the Erythraean Sea* in the first century A.D., although that region including Saurāṣṭra had already passed into the hands of the Śakas in the first century B.C. Menander, likewise, may have accompanied Demetrius in his north-easterly march from Madhyamikā to Mathurā. It may be that sometime elapsed between the conquest of Mathurā (if effected earlier than 184 B.C.) and the expedition to Pāṭaliputra. If so, like a good

⁸ *CHI*, Vol. 1, p. 544, and p. 551.

⁹ Numismatic evidence shows that at a later date he must have been transferred to rule the Upper Indus region from Puṣkalāvati.

general he must have timed it with the great Brāhmaṇa revolution and the *coup d'état* led by Puṣyamitra Śuṅga, *before* the latter should have time to consolidate his position on the throne, and *when* the feelings of the Buddhist subjects of the Maurya rulers were still running high against the usurpation of the Brāhmaṇa *senāpati*. This leads to the strong presumption, I repeat, that the invasion could not have been much after 184 B.C. This is an important consideration which cannot be lightly dismissed, in connection with the correct finding of the leadership of the Yavana forces of the expedition. I shall show later that the Yavana war on the bank of the Sindhu referred to in the *Mālavi-kāgnimitra* could not have taken place in 184 B.C. This reference speaks of a second war under a different leadership, when Puṣyamitra was an old man celebrating his Aśvamedha sacrifice, perhaps a second one, and when Demetrius was long dead and gone.

There is no doubt that Menander played an equally, if not more, important part in the Indo-Greek history of India, but that part he played after Demetrius I and his immediate successors died or got killed in action against Eucratides, and after the latter conquered the dominions of the house of Euthydemus in Bactria, Kābul valley and in both western and eastern Gandhāra (Puṣkalāvati and Takṣaśilā). Eucratides took Bactria in C. 168 or 167 B.C. and supplanted the house of Euthydemus by his own. The fight of Demetrius I against the usurper must have been a long and bitter one in which he, his two sons and a brother were killed.

There are numismatic evidences that Euthydemus II, the eldest son of Demetrius I and his sub-king of Bactria, died young. His coins show a very youthful potrait. Demetrius II, his second son, former governor of the Paropanisadae replaced his brother as his father's sub-king of Bactria and was ruling the country when Eucratides attacked it in 168 or 167

B.C. (Tarn, p. 157 and p. 166), and was probably killed in the early phase of the war. Agathocles, the youngest son of Demetrius I, was evidently ruling the Paropanisadae from Kapisa, when Eucratides, after crossing the Hindu-Kuša, attacked and took the city. Agathocles must have met his death, as all his coins issued from Kapisa show a young head, and Eucratides' square bronze bilingual Kapisa coins replaced them. (E. J. Rapson, *JRAS* 1905, p. 783, No. 1). That Apollodotus, brother of Demetrius I, ruled Gandhāra is evident from the type of his coins. His silver coins bear the types, 'Elephant-Indian bull.' The elephant and the bull are common emblems in Indian mythology and are associated with the deities worshipped by various sects. The bull, as a numismatic emblem, is particularly associated with coins issued from the city of Puṣkalāvati (Carsadda) in the Peshawar District. (*C.H.I.* vol. 1, p. 557). Eucratides had restruck a large number of such Gandhāra coins of Apollodotus (*BMC*, p. XXXV). This shows that he conquered Apollodotus' kingdom of Gandhāra and in the fight Apollodotus probably died about 163 or 162 B.C. which is about the date when Demetrius I also died.¹⁰

This left only Menander among the companions of Demetrius to continue the fight against Eucratides. He was ruling the small territories east of the Jhelum as the representative of the house of Euthydemus. That the Indian conquests of Eucratides and his house were confined to Gandhāra and did not extend beyond the western bank of Jhelum is clear. The coins of Eucratides or his son Heliocles who succeeded him do not indicate their rule in the central and southern Punjab. This shows that Menander had successfully resisted Eucratides and his house. The relationship between Menander and Demetrius I

¹⁰ Tarn, p. 216, *CHI*. Vol. I pp. 447, and 457.

is not definitely known. But that it was a close one is clear. If Tarn is to be believed Menander was his brother-in-law, having married Agathocleia, the youngest sister of Demetrius. He was born in a village called Kalasi in the *Alasandadvīpa*¹¹ (Alexandria-under-the Caucasus), the ruins of which have been discovered near Charikar, between the Panjshir and Kabul river.¹² According to Tarn he was a commoner and was not a Euthydemid by birth (Tarn, p. 124). If so, he must have been a man of uncommon merit, and having joined the army of Euthydemus, rose to the rank of a general by the time Demetrius invaded India. After the death of Demetrius and other direct heirs to the Euthydemus line, he probably legalised his position as the head of the Euthydemid family by marrying Agathocleia, and assumed the royal title. He is undoubtedly to be identified with the Milinda of the Buddhist book, who ruled his kingdom from Sāgala (Sialkot). His dominions in the east undoubtedly included Mathurā. The passage in the *Yugapurāṇa* which states that the Yavanas had ultimately to leave the Middle country on account of a severe fratricidal war among themselves evidently refers in the first instance to Demetrius—Eucratides war in which Demetrius lost his life about 162 B.C. and to the loss of all the Greek possessions of the Madhyadeśa except Mathurā. Menander who was probably a general governing Mathurā was put in charge also of the Central and Eastern Punjab which Demetrius had ruled himself from the capital of his Indian empire—Euthydemia (Sialkot) before leaving to meet Eucratides in Bactria. Menander's association with Mathurā is a long one—first probably, as I have already suggested above, as its Governor under Demetrius and then as the Greek king of the Central and Eastern Punjab. The dis-

¹¹ *Milindapañha*, p. 126.

¹² *CHI. Vol.* p. I 550.

covery a of large number of his coins and a hoard of 96 fresh coins of his son Strato I in Mathurā undoubtedly shows that Mathurā remained a part of Menander's dominions till the time of his son. This is an important fact which will help us to identify the river Sindhu on the banks of which a Yavana battle was fought as referred to in the *Mālavikāgnimitra*.

There is both numismatic and literary evidence that Menander was a Buddhist. The use of symbol of eight-spoked wheel¹³ on one of his bronze issues of coins proves his adherence to Buddhism. In the *Milindapañha* we find that he became a convert to Buddhism after a protracted discussion with the Buddhist Thera Nāgasena, and after his doubts were satisfactorily removed. A convinced convert generally becomes a jealous upholder of his faith. His court became the resort of Buddhist monks whom he sheltered from the persecution of Puṣyamitra Śuṅga. Tārānātha, the Tibetan historian, bears clear testimony to this fact. This is borne out by a passage in the *Dīvyāvadāna* (of much earlier date) that Puṣyamitra Śuṅga issued a proclamation, setting a price of one hundred *dināras* on each head of a Śramaṇa living in Śākala. I have shown elsewhere¹⁴ that Puṣyamitra Śuṅga as the head of the Brāhmaṇa reaction against the Buddhist rule of the Mauryas and the leader of the successful *coup d'état* which installed the Brāhmaṇa Śuṅga rule in Magadha had as a matter of logical sequence of events to follow a vigorous anti-Buddhist policy. Under this historical background it is not possible to dismiss the testimony of Tārānātha and the *Dīvyāvadāna* as mere baseless traditions.

¹³ Tarn however, does not believe it and thinks that the 'wheel' is the symbol of *rājacakravarti*.

¹⁴ Vide my article in *B. C. Law Memorial Vol. I* 'Did Puṣyamitra Śuṅga persecute the Buddhists?'

Under this background it is possible to understand Menander's Indian policy *vis-a-vis* Puṣyamitra Śuṅga in clear perspective. The growing empire of the Śuṅgas bunted on Menander's eastern outpost of Mathurā from Pāficāla in the north and Vidiśā in the south. This was the political motive of his conflict with the Śuṅgas. Added to this was his religious affiliation which rallied round his banner the Buddhist elements against the Śuṅga rule. He challenged Puṣyamitra's imperial claim when the latter was preparing to perform a horse sacrifice, and the imperial forces guarding the sacrificial horse were camping somewhere in Central India above Vidiśā and below Mathurā. The challenge was well-timed. It was as a resistance to the Aśvamedha bound to invoke the enthusiasm of the Buddhist adherents. The nearness of the imperial forces to Mathurā, where a strong Greek force always resided, gave him a strategic advantage which he was bound to utilise. According to the *Mālavikāgnimitra*, the battle took place on the bank of the Sindhu in which the Yavana force was defeated. A close view of the map of that part of the country will show that the reference in the drama as to the battle ground was correct.¹⁵ The highroad from Mathurā down the bank of the Yamunā met at a point, about a hundred miles below the city, where the river Sindhu branched off from the Yamunā as its tributary to flow southward into Central India. There is no doubt that the Yavana force issuing out of Mathurā followed this high-road and met the Śuṅga army somewhere on the bank of the Sindhu.

Now I come back to my original thesis that the Yavana war referred to in the *Mālavikāgnimitra* and the Yavana war referred to in the *Yuga-purāṇa* and by Patañjali are two different events, independent of each other and separated

¹⁵ The view of the scholars who identify the Sindhu with the Indus is unacceptable. *Vide* I.H.D., 1925; *Journal U.P. Hist. Society*, July 1941.

by a considerable time. The Yavana invasion of Pāṭaliputra through Madhyamikā, Mathurā, Pāficāla and Ayodhyā as referred to in the *Yugapurāṇa* and Patañjali's *Mahābhāṣya* took place when Demetrius was alive and Puṣyamitra had just sat on the throne (*supra* pp. ५१-५२). The Yavana war on the river Sindhu took place when Puṣyamitra Śuṅga was an old man, having had a grandson of sufficient age to be able to command the imperial forces guarding his sacrificial horse. Again, it is highly inconsistent that Puṣyamitra should celebrate a horse sacrifice to substantiate his claim to suzerainty of the Middle India, referred to in the drama, at a time when even the neighbouring countries of Sāketa and Pāficāla were in the Greek hands and Pāṭaliputra itself was besieged, as referred to in the *Yugapurāṇa*.

Patañjali's use of the present tense in his reference to the performance of a sacrifice for Puṣyamitra and the imperfect tense in his reference to the siege of Madhyamikā and Ayodhyā no doubt proves that the two events were almost contemporary and occurred during his life time. Patañjali's reference to the siege of Madhyamikā and Sāketa certainly corroborates the evidence of the *Yugapurāṇa* regarding the events which ultimately ended with the siege of Pāṭaliputra, and if the sacrifice mentioned in the *Mahābhāṣya* was a contemporary event, as probably is, it must have been performed by Puṣyamitra, either in celebration of the relief of Pāṭaliputra from the Yavana attack, or as a royal act of the revival of Brāhmanical sacrifices, or both, but never as a claim to suzerainty of the Middle India. That claim could only be advanced after he had recovered most of the lost provinces in the U.P. and Central India and built up an empire and consolidated it. The evacuation of the Madhyadeśa except Mathurā by the Yavanas on account of civil war among themselves must have considerably helped Puṣyamitra in his task of empire building. A considerable time

must have elapsed between the earlier Yavana movement through Madhyamikā, Mathurā, Pāficāla and Ayodhyā ending in the siege of Pāṭaliputra and now, when another Yavana battle was fought on the bank of the Sindhu on the occasion of his horse sacrifice. This was perhaps his second *Aśvamedha*, after Patañjali was probably dead. For, if he was alive, he would probably have made use of this important historic event to illustrate a grammatical rule. He made frequent use of current historical events for this purpose. An independent piece of evidence, the Ayodhyā inscription (*Ep. Ind. XX*, pp. 54-58), though indirect, lends valuable support to this conclusion. The inscription contains this significant passage: '*kośalādlipena dviraśvadmedhayaājinaḥ senāpateḥ Puṣyamitrasya.*' This shows that he performed at least two horse sacrifices, the first one as I showed above, as an act of revival of Brāhmanism after his accession to the throne and the relief of Pāṭaliputra from the siege of the Yavanas under Demetrius, and the second one to uphold his claim to suzerainty of the Madhyadeśa in the evening of his life, probably a few years before his death.

Therefore, it is clear that the sacrifice mentioned by Patañjali and that mentioned by Kālidāsa do not refer to one Yavana war. There were two Yavana wars under two different Yavana leaders—one under the walls of Pāṭaliputra and the other on the bank of the Sindhu, each separated by a long period of time.

The leader of the first Puṣyamitra-Yavana war, I have shown, was Demetrius. But he was dead and gone when the second Puṣyamitra-Yavana battle on the river Sindhu was fought. The Yavana leader of this war was undoubtedly Menander or one of his generals.

Two circumstances point to the personal leadership of Menander himself. First, Menander was alive then. Puṣyamitra died in C. 148 B.C., and the horse-sacrifice was, *ipso facto*, held earlier than this date. The battle on the

bank of the Sindhu was in connection with this sacrifice and was fought still earlier. So the event of the battle may be reasonably put 2 or 3 years before his death. Menander's death, according to Tarn's calculation based on Greek records on which he is an authority, took place about 150-145 B.C. (Tarn, p. 226). It cannot be said either that he had become a very old man when he died, and as such was incapable of leading an army. The fact that his son, Strato I, was a minor when his father died, points to the fact that Menander had not reached a very old age. His latest coins show the head of a middle-aged man¹⁶. Secondly, Menander, as a Buddhist, knew that his personal command of the army would invoke the enthusiasm of the Buddhist adherents and effect a rally round his flag in his crusade against Brāhmanism and Brahmanic rule. This well-known war strategy he was not likely to ignore.

¹⁶ *CHI*. Vol. 1 plates VI, 14 ; pl. 12, 6 ; pl. VI, 7.

MUGHAL REVENUE IN 1680 A.D.

By DASHARATHA SHARMA

IN a Rājasthānī manuscript belonging to my library, I find the following interesting entry :—

“Now begins an account of the Imperial Provinces. There are 21 *subās*, 169 *sarkārs*, 4187 *mabals*. Their total revenue comes to 8,49,17,000 *dāms*. As the provinces of Kandhār is no longer in the Empire, the number of the present *subās* is 20.”

A little further the copyist notes that his facts had been copied in V. 1883 (1826 A.D.) from an account-book of Mohta Rāmsinghī, and that originally these had been taken down from an Imperial account-book of V. 1737 (1680 A.D.).

As the figures given by him are likely to be of considerable use to students of Mughal History, I reproduce them here, with a few remarks of mine in the footnotes.

<i>Subās.</i>	<i>Sarkārs</i>	<i>Mabals</i>	<i>Dāms</i>
Jahānābād	12	229	74,15,00,000
Akbarābād Āgrā	14	268	96,23,90,095
Lāhore	7	300	87,41,95,000
Kābul	1	35	12,35,06,000
Multān	4	92	23,35,30,000
Mālwa Ujjain	11	251	35,75,40,000
Khāndeśa	4	110	40,88,90,000
Deccan	3	80	52,87,20,000
Berār	10	191	49,72,61,000
Teligānā Rāmgarha	2	42	2,00,00,000
Teligāna Deśa	1	43	2,58,50,000
Illāhābas	16	260	37,38,35,000

<i>Subās</i>	<i>Sarkārs</i>	<i>Mahals</i>	<i>Dāms</i>
Ajmer	7	222	54,21,10,000
Behār	8	233	37,48,55,000
Orissā	11	218	46,29,90,000
Ayodhyā	5	190	26,48,55,000
Thaṭṭā	5	54	9,23,90,000
Ahmedābād	19	193	46,29,90,000
Bengāla	27	1127	94,00,00,000
Kāśmīr	1	46	23,02,60,000
Kandhāra (which is not now within the Empire)	1	3	7,97,00,000

After totalling the revenue of the *Subās* as 8,49,35,17,000 *dāms* which he reduced to Rs. 21,23,37,925 at the rate of 40 *dāms* per rupee, the Ms. goes on to stat. that a more accurate total is 8,78,33,56,095 *dāms* or Rs. 21,95,83,902.

Then follow the following details about the Ajmer Province.

"Ajmer has 8 *sarkārs*, 233 *parganās* and a revenue of 63,28,63,650 *dāms* which would mean Rs. 1,58,21,581 at the rate of 40 *dāms* to a rupee.¹

"Sarkār Ajmer has 29 *parganās* with a revenue of 11,70,35,262 *dāms* or Rs. 29,25,881-8-0.

1. <i>Havelī</i> Ajmer	1,00,42,000 <i>dāms</i> or Rs. 2,51,046
2. <i>Parganā</i> Arāin	45,00,000 " " " 1,12,500
3. " Kishangarha	20,00,000 " " " 50,000
4. " Bāndar Sidhrī ²	10,00,000 " " " 25,000
5. " Salīmābād	16,00,000 " " " 40,000
6. " Āmbel	16,00,000 " " " 40,000
7. " Mozābād	27,00,000 " " " 67,500

¹ Curiously enough this account differs from that given above where the number of *sarkārs* is given as 7, the *parganās* 222, and the revenue as 54,21,10,000 *dāms*. Actually the *sarkārs* enumerated come only to 7; so the previous account is probably the more reliable of the two.

² *Āin-i-Akbarī* has Bāndhan Sandarī.

8.	<i>Parganā</i> Phagī	34,00,000 <i>dāms</i> or Rs.	85,000
9.	„ Bhairānī	25,00,000 „ „ „	62,500
10.	„ Jhāk	12,00,000 „ „ „	30,000
11.	„ Devgāon	23,65,000 „ „ „	59,125
12.	„ Khavāl	21,41,121 „ „ „	53,553
13.	„ Parbatsar	30,46,200 „ „ „	76,155
14.	„ Tosinā	25,06,312 „ „ „	62,657/8
15.	„ Bhanāy	44,05,000 „ „ „	1,10,125
16.	„ Masudā	19,20,000 „ „ „	48,000
17.	„ Kharbā	6,60,000 „ „ „	16,500
18.	„ Bhairūdā	7,00,000 „ „ „	17,500
19.	„ Bāhalā	12,00,000 „ „ „	30,000
20.	„ Kckrī	42,60,000 „ „ „	1,06,500
21.	„ Sarwār	40,00,000 „ „ „	1,00,000
22.	„ Rājgarh	14,30,000 „ „ „	35,750
23.	„ Jojāwar of Rānā Rājsingh	19,00,000 „ „ „	47,500
24.	„ Sāmbhar	2,48,00,000 „ „ „	6,20,000
25.	„ Jobner	15,15,000 „ „ „	37,875
26.	„ Marot	65,96,000 „ „ „	1,64,900
27.	„ Narāṇa	55,16,000 „ „ „	1,37,900
28.	„ Rasūlpur	14,00,000 „ „ „	35,000
29.	„ Harsor	16,86,000 „ „ „	42,150
30.	„ Sānghān	3,40,000 „ „ „	8,500
30.	<i>Parganās</i> including 11, 70,35,262 <i>dāms</i> „ „ Rs. 29,85,881-8		
	<i>Ajmer Haveli</i>		

“*Sarkār* Ranthambhor of the Ajmer *subā* has 81³ *parganās* with a revenue of 24,14,09,000 *dāms*, i.e., Rs. 60,35,250. The *rekāb* (perhaps the actual sum payable in the Imperial Treasury) was Rs. 60,35,225.

1.	<i>Parganā</i> Haveli	3,00,000 „ „ „	7,500
2.	„ Khilacpur	20,00,000 „ „ „	50,000

³ The number of *parganās* actually enumerated is 71. So the copyist should have put here 71 instead of 81.

3.	<i>Parganā</i> Khirañi	15,00,000 <i>dāms</i> or Rs.	37,500
4.	" Etāwah	1,16,00,000 " " "	290,000
5.	" Jaitpur	14,00,000 " " "	35,000
6.	" Bhagwantgaṭha	29,50,000 " " "	73,750
7.	" Bālapa	10,00,000 " " "	25,000
8.	" Ālanpur	30,00,000 " " "	75,000
9.	" Bhadalab- Kunḍo ⁴	46,00,000 " " "	115,000
10.	" Vāraṇ	150,00,000 " " "	375,000
11.	" Islāmpur	20,000 ⁵ " " "	5,000
12.	" Ānand	470,000 " " "	11,750
13.	" Vanahaṭā	30,00,000 " " "	75,000
14.	" Chātsū	1,32,00,000 " " "	330,000
15.	" Mālpurā	1,20,00,000 " " "	300,000
16.	" Naiṇvā	75,00,000 " " "	187,500
17.	" Nivāi	3,00,000 ⁶ " " "	75,000
18.	" Malārṇā	1,00,40,000 " " "	2,51,000
19.	" Barodā	6,00,000 ⁷ " " "	1,50,000
20.	" Toḍā Nāgar chāl	70,00,000 " " "	1,75,000
21.	"	1,09,00,000 " " "	2,72,500
22.	" Bhūrā Pahār	3,30,000 " " "	8,250
23.	" Phusodā	11,70,000 " " "	29,250
24.	" Chhāhāṇ	19,80,000 " " "	49,500
25.	" Delāwarā	10,00,000 " " "	25,000
26.	" Khairābād	3,20,000 " " "	8,000
27.	" Khandār	24,00,000 " " "	60,000
28.	" Lohārwarā	8,20,000 " " "	20,500
29.	" Bundī ⁸	80,00,000 " " "	2,00,000

⁴ Most probably the same as Bhadtāon of the *Ain-i-Akbari*.

⁵ The copyist appears to have missed out one zero.

⁶ Here again the copyist seems to have been at fault.

⁷ *Ibid.*

⁸ With this is added the note that Būndī has 360 villages with the revenue of Rs. 350,000.

30.	<i>Parganā</i> Pāṭan ⁹	40,00,000 <i>dāms</i> or Rs.	1,00,000
31.	„ Lākherā ¹⁰	10,00,000 „ „ „	25,000
32.	„ Khaṭkaṛ ¹¹	40,00,000 „ „ „	1,00,000-
33.	„ Bālānā	10,00,000 „ „ „	25,000
34.	„ Koṭā	120,00,000 „ „ „	300,000
35.	„ Palāyatā	34,00,000 „ „ „	85,000
36.	„ Kumbhalā	16,00,000 „ „ „	40,000
37.	„ Aṭevan ¹²	40,00,000 „ „ „	100,000
38.	„ Unayārā	37,30,000 „ „ „	93,250
39.	„ Autarodā	54,30,000 „ „ „	135,450
40.	„ Khātoli	5,90,000 „ „ „	14,750
41.	„ Baṛwāṛa	100,00,000 „ „ „	250,000
42.	„ Pakalādji	30,00,000 „ „ „	75,000
43.	„ Bāmvali	61,27,000 „ „ „	153,175
44.	„ Talāv	12,20,000 „ „ „	30,500
45.	„ Bālākhedo	10,00,000 „ „ „	25,000
46.	„ Jhiyāl	17,20,000 „ „ „	43,000
47.	„ Chhāparī	33,00,000 „ „ „	82,500
48.	„ Sāngodo	45,00,000 „ „ „	107,500
49.	„ Sopar	140,00,000 „ „ „	350,000
50.	„ Karwar	12,50,000 „ „ „	31,250
51.	„ Māngrol	60,80,000 „ „ „	152,000
52.	„ Luneharā	8,50,000 „ „ „	21,250
53.	„ Sīhasālī ¹³	10,00,000 „ „ „	25,000
54.	„ Sarsop	23,00,000 „ „ „	57,500
55.	„ Ambero	1,20,000 „ „ „	30,000
56.	„ Loharwāṛā	8,00,000 „ „ „	20,000
57.	„ Nagar	36,70,000 „ „ „	91,750

⁹ With this is added the note that Pāṭan has 42 villages with the revenue of Rs. 625,000.

¹⁰ Here the note adds that Lākherā has 42 villages with the revenue of Rs. 100,000.

¹¹ Here the note adds that Khaṭkaṛ has 240 villages with the revenue of Rs. 300,000.

¹² “Āṭūp” of the *Āin-i-Akbarī*.

¹³ “Sahansari” of the *Āin-i-Akbarī*.

58.	<i>Parganā</i> Rawdhan	11,20,000 <i>dāms</i> or Rs.	28,000
59.	" Majhara ¹⁴	50,00,000 " " "	1,25,000
60.	" Āmbalwād	8,00,000 " " "	20,000
61.	" Bambhori	15,00,000 " " "	37,500
62.	" Khaḍharā	6,00,000 " " "	15,000
63.	" Jalwāro	27,00,000 " " "	67,500
64.	" Gogor	26,00,000 " " "	65,000
65.	" Kundī	6,00,000 " " "	15,000
66.	" Rīchhwō ¹⁵	8,00,000 " " "	20,000
67.	" Cācrāṇī ¹⁶		
68.	" Kabāṇī ¹⁷		
69.	" Bināyat ¹⁸		
70.	" Goraḍī	5,00,000 " " "	12,500
71.	" Majharā <i>Parganā</i> ¹⁹		

" *Sarkār* Chitore of the *subā* Ajmer has 34 *parganās* with the revenue of 10,45,40,000 *dāms* or Rs. 26,13,500.

1.	<i>Havelī</i> Chitore	10,00,000 <i>dāms</i> or Rs.	2,50,000 ²⁰
2.	<i>Parganā</i> Udaipur	22,00,000 " " "	55,000
3.	" Arpeto	2,00,000 " " "	5,000
4.	" Mohī Islāmpur	1,50,000 " " "	3,750
5.	" Kosīthal Sa-lampur	11,00,000 " " "	27,500
6.	" Bhainsarod Ūparmāl	35,00,000 " " "	87,500
7.	" Veghūn	20,00,000 " " "	50,000
8.	" Bāghor	8,00,000 " " "	20,000
9.	" Pur	80,00,000 " " "	2,00,000

¹⁴ A note adds that the number of villages in it was 1440 and the revenue 1,51,00,000 *dāms*.

¹⁵ A note adds that it had 12 villages.

¹⁶ A note adds that it had 160 villages.

¹⁷ A note adds that it had 62 villages.

¹⁸ A note adds that it had 12 villages.

¹⁹ This name is repeated by the copyist with the addition of the word "*pargana*" at the end of "*pargana* Majhara."

²⁰ Either the *dāms* or the rupees are wrong.

10.	<i>Parganā</i> Jiharān	30,00,000	<i>dāms</i> or Rs.	75,000
11.	„ Kapāsaṇ	11,00,000	„ „ „	27,500
12.	„ Sādaḍī	5,00,000	„ „ „	12,500
13.	„ Sājādpur	10,00,000	„ „ „	25,000
14.	„ Ghosuḍī	3,00,000	„ „ „	7,500
15.	„ Madāriyā	2,00,000	„ „ „	5,000
16.	„ Hamīrpur	50,000	„ „ „	1,250
17.	„ Nīmach	20,00,000	„ „ „	50,000
18.	„ Badnor	10,00,000	„ „ „	25,000
19.	„ Māṇḍalgaṛh	80,00,000	„ „ „	2,00,000
20.	„ Dūngarpur	160,00,000	„ „ „	4,00,000
21.	„ Bānswāra	80,00,000	„ „ „	2,00,000
22.	„ Māṇḍal	21,00,000	„ „ „	52,500
23.	„ Sāwar	34,00,000	„ „ „	85,000
24.	„ Vāgṛo	47,00,000	„ „ „	1,17,500
25.	„ Samel	2,90,000	„ „ „	7,250
26.	„ Jājpur	41,90,000	„ „ „	1,04,750
27.	„ Phūliyo	44,60,000	„ „ „	1,11,500
28.	„ Chainpur	1,50,000	„ „ „	37,500
29.	„ Rāmpuro	148,00,000	„ „ „	3,70,000
30-34 ²¹			

“*Sarkār* Nāgor of the *subā* of Ajmer had 31 *parganās*, if its 18 *paṭṭīs* be included. Revenue 1,91,61,000 *dāms* or Rs. 4,79,035 ; 7,30,94,388 *dāms* or Rs. 18,27,359-12-²².

1.	The <i>Havelī</i>	3,00,000	<i>dāms</i> or Rs.	75,000
2.	The <i>Kasbah</i> Nāgor			
	Fort	1,20,000	„ „ „	30,000
3.	<i>Paṭī</i> Indāṇa	24,00,000	„ „ „	60,000
4.	„ Bhadāṇa	9,45,000	„ „ „	23,625
5.	„ Pardor	3,50,000	„ „ „	8,750

²¹ From the account given above, it is obvious that the *Sarkār* had 34 *parganās*. *Parganās* 30-34 are not, however, to be found in the above list.

²² The figures 7, 30,94, 388 *dāms* with the corresponding sum of rupees are added in a margin.

6.	<i>Paṭī</i>	Baḷadū	6,00,000	<i>dāms</i> or Rs.	15,000
7.	"	Jākhoṛā	3,50,000	" " "	8,750
8.	"	Khāṭu	6,45,000	" " "	16,135
9.	"	Sanḍil	17,40,000	" " "	43,500
10.	"	Sateran	70,000	" " "	1,750
11.	"	Jāyal	16,00,000	" " "	40,000
12.	"	Kūchorā	21,00,000	" " "	52,500
13.	"	Kubhārā	6,45,000	" " "	16,125
14.	"	Lāḍnū	10,45,000	" " "	26,150
15.	"	Rūn	30,60,000	" " "	76,500
16.	"	Nokho	4,50,000	" " "	1,12,500 ²³
17.	"	Koliyo	9,05,000	" " "	22,625
18.	"	Khiyālā	7,55,000	" " "	17,875
19.	<i>Parganā</i>	Ḍiḍwānā	50,00,000	" " "	1,25,000
20.	"	Dronpur- Bikāner	18,00,000	" " "	45,000
21.	Fatahpur	Town	25,00,000	" " "	42,500
22.	Rasūlpur		8,10,000	" " "	20,250
23.	Chhārod		10,00,000	" " "	25,000
24.	Bārāgāon		1,90,000	" " "	4,750
25.	Sāhoṭh		2,55,000	" " "	6,375
26.	<i>Parganā</i>	Amarsar	1,51,04,388	" " "	3,77,309-8
27.	"	Revāsā	45,50,000	" " "	1,13,750
28.	"	Kāslī	27,50,000	" " "	67,625
29.	"	Manorpur	51,95,000	" " "	1,29,875
30.	"	Mertā	1,40,00,000	" " "	3,50,000 ²⁴
31.	"	Pāṭodā	3,70,000	" " "	9,250

"*Sarkār* Jodhpur of the Ajmer *subā* has 27 *parganās*. Its revenue is 6,32,05,000 *dāms* or Rs. 15,80,125.

1. *Parganā* Jodhpur 155,25,00,000 *dāms* or Rs. 3,88,125²⁵
2. *Havelī* Jodhpur 60,00,000 " " " 1,50,000
3. *Tafā* Āsop 15,00,00 " " " 37,500

²³ There is perhaps a mistake on the side of the Rupee column.

²⁴ The copyist adds that the *parganā* is now with 'Jopur.'

²⁵ Here is added the note that Jodhpur has 15 *paṭīs* and 18 *parganās*.

4. <i>Tafā</i> Indāwāti	50,000 <i>dāms</i> or Rs,	1,250
5. „ Pāli ²⁶	4,00,000 „ „ „	10,000
6. „ Bāhalo ²⁷	3,00,000 „ „ „	7,500
7. „ Bilāḍo	6,00,000 „ „ „	15,000
8. <i>Paṭī</i> Pipār	25,00,000 „ „ „	62,500
9. <i>Tafā</i> Bhādrājuṇ	1,00,000 „ „ „	25,000 ²⁸
10. „ Dhūnaṇo	3,00,000 „ „ „	7,500
11. „ Thorwo	3,00,000 „ „ „	7,500
12. „ Sātalmer	8,00,000 „ „ „	20,000
13. „ Gudoch	2,00,000 „ „ „	5,000
14. „ Koḍhaṇo	75,000 „ „ „	1,875
15. <i>Tafā</i> Khīnwsar	3,00,000 „ „ „	7,500
16. „ Mahewā	12,00,000 „ „ „	30,000
17. <i>Parganā</i> Sojat with 243 villages	80,00,000 „ „ „	2,00,000
18. „ Jaitāraṇ	80,00,000 „ „ „	2,00,000
19. „ Siwāṇa	30,00,000 „ „ „	75,000
20. „ Phalodi	27,00,000 „ „ „	67,500
21. „ Jālor	1,15,00,000 „ „ „	2,87,500
22. „ Sirohī with two <i>mabals</i> , Sirohī and Ābū	1,20,00,000 „ „ „	3,00,000
23. „ Sānchor	44,80,000 „ „ „	62,000
24. „ Mertā.	1,40,00,000 „ „ „	3,50,000

“*Sarkār* Kumbhalmer of the Ajmer Province has the revenue of 1,50,00,000 *dāms* or 3,75,000 rupees.

“*Sarkār* Bikāner of the Ajmer *subā* has the revenue of 1,00,00,000 *dāms* or Rs. 2,50,000.

“*Sarkār* Jaisalmer of the Ajmer Province has 7 *parganās*.

²⁶ It had 3 *mabals*, Pali, Rohaṭ, and Bārlā.

²⁷ It had 2 *mabals*, Bāhalā and Bālūndā.

²⁸ Figures on one side are wrong. Total should be checked.

1. Jaisalmer	}	75,00,000	,,	,,	1,87,500
2. Bikanpur.					
3. Ludravo					
4. Barsalpur					
5. Pūgal					
6. Bārmer					
7. Kotṭo.					

“*Sarkār* Jahānābād has 50 *mabals* with the total revenue of 23,99,01,183 *dāms*.

1. <i>Havelī</i> Shahjahānābād	94,45,000 <i>dāms</i> ²⁰
2. <i>Parganā</i> Ādhā	15,00,000 ,,
3. ,, Vīlor	40,00,000 ,,
4. ,, Dānsaṇ	10,00,000 ,,
5. ,, Surtānpur	2,00,000 ,,
6. ,, Saṅarpur	5,00,000 ,,
7. ,, Sonapat	64,00,000 ,,
8. ,, Sikandarābād	50,00,000 ,,
9. ,, Farīdābad	90,00,000 ,,
10. ,, Gaḍhmuktesvar	30,00,000 ,,
11. ,, Kāsṇī	68,85,000 ,,
12. ,, Islāmābad Nagar	31,65,000 ,,
13. ,, Ajīmābād	20,00,000 ,,
14. ,, Dādri	51,90,000 ,,
15. The Mint	2,60,55,000 ,,
16. <i>Parganā</i> Rohtak	80,10,000 ,,
17. ,, Saṇāṇ	40,00,000 ,,
18. ,, Sarāwā	40,50,000 ,,
19. ,, Sakedu	18,00,000 ,,
20. ,, Mojaskarī	20,000 ,,
21. ,, Kāthlā	25,00,000 ,,
22. ,, Golar	22,80,000 ,,
23. ,, Khargodā	8,00,000 ,,
24. ,, Lūṇī	35,20,000 ,,

²⁰ The figure for the Shahājānābād Province are given only in *dāms*.

25.	<i>Parganā</i> Māndot	10,00,000 <i>dāms</i> .
26.	„ Meerut	1,00,00,000 „
27.	„ Hāpur	40,00,000 „
28.	„ Bāghpat	50,00,000 „
29.	„ Pānīpat	1,20,40,000 „
30.	„ Baran	52,00,000 „
31.	„ Hāpal	41,60,000 „
32.	„ Sādulgarh	10,00,000 „
33.	„ Jhāḍasā	22,80,000 „
34.	„ Jhajjar	125,00,000 „
35.	„ Jhūnjaṇū	24,00,000 „
36.	„ Gopalpur	22,60,000 „
37.	„ Gāngarohā Fort	3,00,000 „
38.	„ Masudābād	23,30,000 „
39.	„ Hastināpur	66,30,000 „
40.	„ Amīrābād	40,00,000 „
41.	„ Pālam	50,55,000 „
42.	„ Partāppur	18,50,000 „
43.	„ Barnāwa	12,60,000 „
44.	„ Pūth	20,90,000 „
45.	„ Māl Mohalpur	8,00,000 „
46.	„ Tōḍo Bhagawān	20,00,000 „
47.	„ Jalālpur	20,00,000 „
48.	„ Jalālābād	30,00,100 „
49.	„ Jharoḍī	54,00,000 „
50.	„ Jewar	50,00,000 „ ³⁰

“*Sarkār* Rewāri of the Jahānābād Province has 11 *mabals* with a total revenue of 3,17,40,000 *dāms*.

1.	<i>Parganā</i> Rewāri	1,00,00,000 <i>dāms</i>
2.	„ Ratāi Jhiyā ³¹	34,00,000 „
3.	„ Kot Kāsim	35,00,000 „
4.	„ Lohāno Chobāro	8,00,000 „
5.	„ Nimrāṇa	12,00,000 „

³⁰ The exact total, according to the copyist, is 23,56,65,100 *dāms*.

³¹ Mentioned as Ratāi Jatāi in the *Ain-i-Akbarī*, II, 293.

6.	<i>Parganā</i> Bāmval	42,00,000	„
7.	„ Bamboro	15,00,000	„
8.	„ Hasan	34,76,604	„
9.	„ Gilot ³²	9,00,000	„
10.	„ Tawṛu	9,65,000	„ ³³
11.	„ Pataudī	25,00,000	„

“*Sarkār* Budāūn has twenty *mabals* with a total revenue of 10,38,50,000 *dāms*.

1.	<i>Parganā</i> Budaūn Havelī	1,02,35,000	„
2.	„ Punkhar	5,00,000	„
3.	„ Telhār	35,00,000	„
4.	„ Paramnagar	40,00,000	„
5-6.	„ Sirbāro Rāmkoṭ	12,00,000	„
7.	„ Mahānagar	12,17,000	„
8.	„ Mhārābād	60,00,000	„
9.	„ Sīhā	30,00,000	„
10.	„ Ajāū	49,90,000	„
11.	„ Añwalā	14,00,000	„
12.	„ Bareilly	4,00,00,584	„
13.	„ Sahājāhanpur		
14.	„ Parasarīr	40,00,000	„
15.	„ Sahājāhanpur	2,40,00,000	„
16.	„ Baknorī		
17.	„ Sahswāṇo	46,30,000	„
18.	„ Koṭ	18,00,000	„
19.	„ Mandhosansi	30,00,000	„
20.	„ Nīdhpur	31,00,000	„

“*Sarkār* of Tijārā in the *subā* of Shājanābad had 18 *mabals* and a revenue of 2,36,25,000 *dāms*.

1.	<i>Havelī</i> Tijārā	38,10,000	„
2.	<i>Parganā</i> Jhanjhātā	3,00,000	„
3.	„ Sailawat	18,40,000	„
4.	„ Biloharī	19,70,000	„

³² Mentioned as Ghilot in the *Āin-i-Akbarī*, II, 293.

³³ The *Āin-i-Akbarī* gives the name as *Tawṛā*.

5.	<i>Parganā</i> Jhamrāwat	11,00,000 <i>dāms</i>
6.	„ Sambhāwarī	9,00,000 „
7.	„ Fatiābād	18,00,000 „
8.	„ Gaḍhaharā	5,35,000 „
9.	„ Ghorākaṇṭha	2,60,000 „
10.	„ Indor	20,00,000 „
11.	„ Jhamar Jhamrī	20,00,000 „
12.	„ Pur	6,40,000 „
13.	„ Bīsrū	3,85,000 „
14.	„ Sākras	11,45,000 „
15.	„ Firozpur	36,25,000 „
16.	„ Luṇakho	22,00,000 „
17.	„ Nagīnā	9,00,000 „
18.	„ ³⁴	

“*Sarkār* Hissār Firozā of the *subā* Jahānābād has 28 *mabals* with the total revenue of 7,25,35,000 *dāms*.

1.	Hissār	} 12,50,000 <i>dāms</i>
2.	Hissār Haveli	
3.	<i>Parganā</i> Aṭhkherā ³⁵	20,00,000 „
4.	„ Bhaṭner	30,00,000 „
5.	„ Badoṛā	6,80,000 „
6.	„ Barwālā	36,50,000 „
7.	„ Puniyān	25,00,000 „
8.	„ Jīnd	63,00,000 „
9.	„ Dhātrāṭh	10,80,000 „
10.	„ Siwrān	15,65,000 „
11.	„ Siwānī	2,90,000 „
12.	„ Shāhābād	32,00,000 „
13.	„ Rewāṛī	12,50,000 „
14.	„ Agrohā	24,00,000 „
15.	„ Baiṇīwāl	24,00,000 „

³⁴ The name of the 18th *parganā* and its revenue figures have not been given.

³⁵ Mentioned as Atkherah' (var. Aukharah) in the *Ain-i-Akbarī*, I, 1, 294. p.

16.	<i>Parganā</i> Baiḍhuṇ	6,80,000	<i>dāms</i>
17.	„ Bhārmalī	18,00,000	„
18.	„ Tosām	19,00,000	„
19.	„ Ṭōhānā	60,00,000	„
20.	„ Mālpur	50,00,000	„
21.	Sīdhmukh of Bikāner	50,00,000	„
22.	<i>Parganā</i> Sirsā	75,00,000	„
23.	„ Sanzdah Dihāt	14,00,000	„
24.	„ Fatiābād	17,20,000	„
25.	„ Gohānā	43,40,000	„
26.	„ Hānsī	77,88,000	„
27.	„ Khāṇḍā	11,20,000	„
28.	„ Maham ³⁶	80,00,000	„

“*Sarkār* Sirhind of the *subā* Jahānābād has 38 *mabals* with the total revenue of 23,09,45,000 *dāms*.

1. Haveli Sirhind with

	2 <i>mabals</i>	2,00,00,000	<i>dāms</i>
2.	<i>Parganā</i> Phūldarī	70,000	„
3.	„ Thāncsar	60,50,000	„
4.	„ Ambālā	52,00,000	„
5.	„ Nour ³⁷	1,20,00,000	„
6.	„ Jalālābād ³⁸	10,00,000	„
7.	„ Pahār Bilhāsābād	1,00,01,200	„
8.	„ Bhaṭiṇḍah	70,00,000	„
9.	„ Baraṇā	38,15,000	„
10.	„ Jhaṭāwī Durāhah ³⁹	1,00,00,000	„
11.	„ Garbād Ambālā	44,00,000	„
12.	„ Naphodar	34,80,000	„
13.	„ Mahro	1,44,40,000	„
14.	„ Ghorāṇā	7,60,000	„
15.	„ Shāhābād	66,50,000	„

³⁶ Called Muhim in the *Ain-i-Akbarī*.

³⁷ I am not sure of having read the name correctly.

³⁸ The copyist adds that it was formerly in the *subab* of Multān.

³⁹ Is it 'Chahat' of the *Ain-i-Akbarī*, II, 296.

16.	<i>Parganā</i> Mansūrpur	53,00,000	<i>dāms</i>
17.	„ Mustafābād	6,08,50,000	„
18.	„ Firozābādpur	1,20,00,000	„
19.	„ Ropar ⁴⁰	6,05,000	„
20.	„ Ludhiānā	30,00,000	„
21.	„ Madhīwāra	50,45,000	„
22.	„ Hāpaṛā ⁴¹	15,70,000	„
23.	„ Kariyāt	15,45,000	„
24.	„ Kuhaḍāṇ	78,80,000	„
25.	„ Ālampur	20,00,000	„
26.	„ Jāfarābād	1,31,10,000	„
27.	„ Samānā	1,57,00,000	„
28.	„ Lakhi Jangal	50,00,000	„
29.	„ Muhammadkoṭ	30,00,000	„
30.	„ Sunām	80,00,000	„
31.	„ Dhunḍhā	24,00,000	„
32.	Saḍhorā	7,00,000	„
33.	<i>Parganā</i> Maslān ⁴²	73,25,000	„
34.	„ Mālner	26,00,000	„
35.	„ Ināyatābād	4,00,000	„
36.	„ Fatahpur	15,00,000	„
37.	„ Kaithal ⁴³	112,50,000	„

“*Sarkār* Sambhal of the *subā* Shāhjahānābād has 46 *mabals* with the total revenue of 13,18,40,000 *dāms*.

1.	Haveli Sambhal	52,05,000	„
2.	<i>Parganā</i> Islāmābād	30,00,000	„
3.	„ Akbarābād	24,00,000	„
4.	„ Amrodā	26,00,000	„
5.	„ Bijnor	8,00,000	„
6.	„ Basārā	2,00,000	„
7.	„ Chāndpur	68,75,000	„

⁴⁰ Wrongly put down as 'Rokhar' by the copyist.

⁴¹ 'Hapari' of the *Ain-i-Akbari*, II, p.296.

⁴² Called 'Masehgan' in the *Ain-i-Akbari*.

⁴³ Only 37 entries, because of the 1st being regarded as 2 *mabals*.

8.	<i>Parganā</i>	Sadūraṇ	20,00,000	<i>dāms.</i>
9.	„	Devrā	28,00,000	„
10.	„	Dhārsar	12,00,000	„
11.	„	Rustamābād	71,60,000	„
12.	„	Sambhal Khurd	9,00,000	„
13.	„	Islāmpur	6,70,000	„
14.	„	Āzampur	26,00,000	„
15.	„	Ugahārī	10,00,000	„
16.	„	Badrau	24,00,000	„
17.	„	Jhankh ⁴⁴	12,30,000	„
18.	„	Jalālābād	30,00,000	„
19.	„	Dhākā ⁴⁵	14,00,000	„
20.	„	Alaspur	4,00,000	„
21.	„	Rājapur	9,20,000	„
22.	„	Shāhjahānpur	30,00,000	„
23.	„	Sāhanspur ⁴⁶	18,75,000	„
24.	„	Sherpur	195,00,000	„ ⁴⁷
25.	„	Shehārah ⁴⁸	44,00,000	„
26.	„	Mast Alipur	12,00,000	„
27.	„	Masūdābād	44,00,000	„
28.	„	Sarsī	10,20,000	„
29.	„	Sarsāwā	15,00,000	„
30.	„	Shāhī	20,00,000	„
31.	„	Salempur	45,50,000	„
32.	„	Naroli	20,00,000	„
33.	„	Naginā ⁴⁹	80,00,000	„
34.	„	Doḍam ⁵⁰	4,00,000	„
35.	„	Shāhābād	1,20,00,000	„
36.	„	Kīratpur	46,00,000	„

⁴⁴ Is it Jhāla of the *Āin-i-Akbarī*.

⁴⁵ *Āin-i-Akbarī* has Dhakah.

⁴⁶ *Āin-i-Akbarī* has Sahanspur.

⁴⁷ The copyist has put one extra zero.

⁴⁸ *Āin-i-Akbarī* has Shehārah.

⁴⁹ *Āin-i-Akbarī* has Nadīnah.

⁵⁰ Reading doubtful May be मोदम.

37.	<i>Parganā</i> Alārakh	38,00,000 <i>dāms</i>
38.	„ Gewar	80,000 „
39.	„ Gābho	18,00,000 „
40.	„ Lachh	25,00,000 „
41.	„ Ghāngharwās	16,30,000 „
42.	„ Manjhaul ⁵¹	38,00,000 „
43.	„ Mandāwar	35,50,000 „
44.	„ Baṇotāṇ	14,00,000 „
45.	„ Naḥṭaur	40,00,000 „
46.	„ Himaunah	14,00,000 „

“*Sarkār* Sahāranpur has 28 *mahals* with the total revenue of 10,23,878 *dāms*.⁵²

1.	<i>Havelī</i> Sāhāranpur	80,60,000 <i>dāms</i>
2.	<i>Parganā</i> Indrī	75,80,000 „
3.	„ Anhnāh	44,50,000 „
4.	„ Bagherā ⁵³	23,80,000 „
5.	„ Bīhath	20,00,000 „
6.	„ Bundhāṇā	9,00,000 „
7.	„ Baḍolī	68,85,000 „
8.	„ Bhāmā ⁵⁴	12,75,000 „
9.	„ Parjad	31,00,000 „
10.	„ Thānckul	30,60,000 „
11.	„ Tughlakpur	30,00,000 „
12.	„ Tatārpur	14,80,000 „
13.	„ Choli	12,25,000 „
14.	„ Bidthāwal	18,50,000 „ ⁵⁵

“*Sarkār* Nārṇol has 15 *mahals* with a total revenue of 7,74,25,000 *dāms*.

“*Sarkār* Faizābād has 12 *mahals* with the total revenue of 3,66,50,000 *dāms*.

⁵¹ *Ain-i-Akbarī* has Manjhanlah.

⁵² The figure are obviously wrongly totalled.

⁵³ *Ain-i-Akbarī* has Baghrā.

⁵⁴ The *Ain-i-Akbarī* has Bhumah (Elliot Bhumah).

⁵⁵ With this number the detailed figures for the *Sarkārs* end.

“*Sarkār Śrīnagar* has 7 *mabals* with the total revenue of 50,00,000 *dāms*.

“*Sarkār Kumbhal* has 2 *mabals* with the total revenue of 31,00,000 *dāms*. It was formerly included in *Kāngrā*.

“*Sarkār Kumāūn* has two *mabals* with the total revenue of 1,18,00,000 *dāms*. It is in the *Inām* of *Rājā Cānd Bahādur*, a *Zamindār*.”⁵⁶

⁵⁶ There are no figures for the other provinces. The copyist, being a *Rājasthani*, was probably interested in two *subahs* only, the Imperial *subah* of Delhi or *Shāhjahānābād* and his own, of *Ajmer*.

OBITUARY

PANDIT MADAN MOHAN MALAVIYA

In the passing away of Pandit Madan Mohan Malaviya, the country has lost one of her foremost patriots who had for over half a century occupied a prominent position in the India's political and educational life. Of his political work all that need be said here is that he gave up a lucrative career at the bar in order to devote himself entirely to public service. As a former Judge of the Allahabad High Court said in reference to his legal career, "Young Malaviya had the ball at his feet, but he refused to kick it." For a whole generation he was one of the best loved figures on the Congress platform : his silver tongued oratory, his sweet reasonableness, his gift of managing an audience, aroused universal applause and admiration. Even when events took a course of which he did not wholly approve, his words were listened to with respect. But it is Malaviyaji, the creator of the Hindu University and the apostle of Hindu culture, that we shall miss most. He represented the sublime simplicity and grace of the ancient sages. He was learned in Sanskrit literature ; he had extracted from it all that is priceless and timeless in it ; and his speeches and writings bore evidence of the completeness with which he had absorbed the vital elements of Indian civilisation. Nor was he unmindful of the need for a common national language more suited to contemporary conditions, and he was one of the most consistent propagandists of Hindi. Indeed, it will be true to say that Hindi owes more to him than to any other single individual. This Institute will long mourn his death. He presided over the ceremony at which it was inaugurated. He came to it in spite of feeble health and paid a touching tribute to the scholarship and character of Dr. Ganganatha Jha. We shall not soon forget his

figure, clad in spotless white, his genial smile, his great understanding, and the memory of his blameless life will long remain an inspiration.

DR. S. KRISHNASWAMY AIYANGAR

In the death of Dewan Bahadur Dr. S. Krishnaswamy Aiyangar Indian historical scholarship has suffered a great loss, and the *Ganganatha Jha Research Institute* has lost one of its Honorary Members. He was born on 15-4-1871 in the village of Śākkottai in Tanjore district. He had his college education in the Central College, Bangalore. He took his M.A. Degree in 1899 and his thesis for the degree *History of Mysore under the Udayars* was published in the *Madras Review* in 1900. He cultivated from then the acquaintance of the late lamented Epigraphist Mr. V. Venkayya and took to the study of ancient Tamil literature with eagerness. He published in 1900 two papers on *Chola Ascendancy* and *Chola Administration* which won for him great praise from Dr. Hultzsch who advised him to continue to give real scope to his intelligence in interpreting the historical value of inscriptions. His next important publication was on the *Augustan age of Tamil literature* which won the appreciation of the late Dr. Fleet and Sir Richard Temple. Encouraged by such eminent Orientalists, Dr. Aiyangar while continuing to be on the staff of the Central College, Bangalore devoted all his spare time to research studies in Indian History. In 1908 Prof. Aiyangar co-operated with Mr. F. J. Richards, I.C.S. and the late Reverend Father A. M. Tabard in founding the *Mythic Society* at Bangalore. In 1910 he became an assistant to Mr. Weir, Inspector General of Education, Mysore and next year a single volume containing all his papers under the title *Ancient India* was published. In 1914 when a chair of Indian History and Archaeology was created in the University of Madras Dr. Aiyangar

was appointed to it and he held the Chair till his retirement in 1929. During these fifteen years Dr. Aiyangar devoted all his time and energy to the study of South Indian History. A number of books, monographs, articles on various periods of South Indian History such as the *Pallavas*, the *Cholas* and *Vijayanagar* have been published. His latest publications are two volumes on the *History of Tirupati*.

In addition to bringing out his studies in research in the form of books and articles Prof. Aiyangar trained a number of students for research in Indian History. Lecturers and Professors also frequently met him and took his valuable guidance in research in Indian History. He delivered twenty-five years ago the Readership lectures in the Calcutta University which honoured him with an honorary Doctorate. He was President of the *All-India Oriental Conference* and of the *Indian History Congress*, Member of the *Indian Historical Records Commission* and *Honorary Correspondent of the Archaeological Survey of India*. He was associated editor of the *Indian Antiquary* and the editor of the *journal of Indian History* for several years. Scholars all over India honoured him by presenting a commemoration volume in 1936 and on the occasion of his 70th Birthday the collected works of Dr. Aiyangar were published in two volumes and presented to him.

The Government conferred on him the title of Dewan Bahadur in recognition of his services to the cause of University education. Very recently Mysore University honoured him with the Honorary Degree of Letters. Prior to his death he was engaged in preparing a series of lectures on Rāmānuja to be delivered at the Allahabad University. He died full of age and honours towards the end of November 1946, and his name will for ever be remembered as a pioneer in the field of South Indian Historical research.

REVIEWS OF BOOKS

THE ADVAITA AKṢARA MĀLIKĀ. Published by the Kamakoti Kośa Sthānam, 57 West Dabir Street, Kumbakonam, Madras Presidency. pages. 6 x—450 pages, 9 illustrations. September, 1946. Price Rs. 5.

This is a volume containing 51 essays in Sanskrit on Advaita by various scholars especially of South India in commemoration of the golden jubilee of the Advaita Sabhā started in 1895 at Kumbakonam, Madras Presidency. The present volume is due to the initiative of the present Jagadguru Śaṅkarācārya of the Kañcī Kāmakoti Pīṭham. The Ācārya states following the *Śaṅkara Bhāṣya* that Advaitic realisation alone is the panacea of all the ills of the world based on various distinctions. The place of honour is given to the essay on *Śiva-Viṣṇu-Abheda* which was emphasised by Ādi-Śaṅkara and which would be the bed-rock of all philosophical discussion and which, rightly followed in practice, would end all controversies about one's *इष्टदेवता* and the differences in name and form. The next article deals with the 8 fundamentals as Nirguna-Brahman, Jīvanmukti, etc., which distinguish the Advaita as a special system of philosophy from the Upaniṣads down to the present day.

The challenge thrown by Dr. Thibaut's criticism that Bādarāyaṇa's *Brahma-Sūtra* would favour the Viśiṣṭādvaita view is taken up and answered in a long article by Krishnamurty Śastry. That the *Bhagavad-Gītā* teaches Advaita is emphasised by Karapatri Swami. That the Upaniṣads yield Advaita in the main is admitted practically by all western scholars ; and the various texts in the Samhitās reminiscent of the Upaniṣads are mentioned in 4 articles.

The fundamental aim of the Dharma-Sūtras and Dharma-Śāstras is mentioned to be Advaitic realisation as Manu

himself has emphasised. Likewise it has been shown that Pūrva-Mīmāṃsā, Itihāsa and all other works of importance all tend towards Advaita. The work concludes with a Svastyayanam mentioned by Śaṅkara.

For the popularity of the essays it would be beneficial to have the work translated into popular languages as well. It is not often that we come across books like the above representing the cream of Advaita scholarship.

The book is very useful for the students of Philosophy and Hindu culture. We congratulate the authorities of the Pīṭham to have encouraged such publications for the good of students and scholars alike.

THE KĀMAKOTĪ GRANTHĀVALĪ

This is a series started by His Holiness the Jagadguru Śaṅkarācārya of the Kāñci *Kāmakotī Pīṭham* of Kumbakonam. The object of the series is mainly to bring home the devotional poems of Sanskrit literature to the door of the non-Sanskrit students and with this end in view each volume contains a literal word for word translation of Sanskrit into Tamil with notes elucidating the text. In many books an English translation is appended for the benefit of the English knowing public. The Ācārya Swamigal prefaces each work with a Śrīmukham laying stress on the importance of the work ; and a scholar of repute contributes a lengthy preface expatiating on the author, his age and the merits of the work in question. Choice illustrations adorn each book and the books are priced cheap to make them easily available. The volumes are printed on good paper and the credit of the bringing up of these publications is due to Mr. D. Balasubramania Ayyar, Proprietor, Educational Publishers, Messrs B. G. Paul and Co., Madras.

1. *Bhaja-Govindam*. This is the famous popular poem of Ādi-Śaṅkara whose many extracts have become household words among the Hindus.

2. *Pragnottara-ratna-mālikā* is a catechism by Ādi-Śaṅkara in 67 popular verses. This is rendered into Tamil by the Kumbakonam Ācārya himself and then rendered also into Telugu and into English with notes.

3. *Kāśī-Viśveśvara-Stotra* is a popular poem in praise of Lord Viśveśvara by Loshta Deva who lived a great scholar's life and died as Kṣetra Sannyāsin at Benares. Dr. V. Raghavan has added a foreword expatiating on the beauties of the poem.

4. *Viṣṇu-Sahasranāma Bhāṣya* of Śaṅkara—It has strong tradition behind it in support of its genuineness and is an excellent introduction to the Advaita-Vāda and has marks of the earlier production of the author.

5. *The songs of Sadāśiva Brahmendra*.—Sadāśiva, the author inter alia of the *Vṛtti* on Śaṅkara's *Sūtra-Bhāṣya* and Patañjali's *Yoga-Sūtra* is an Advaitic yogī saint of South India who realised Brahman and is considered as a Jīvanmukta. His songs in Sanskrit have a powerful appeal and they are now edited with Tamil and English translation by V. Narayana Ayyar. T. M. Krishnaswamy Ayyar, Chief Justice of the Trivandrum High Court has written a foreword in English.

6. *Anandasāgara-stava*.—This is a poem of Nilakaṇṭha Dikṣita who was the prime minister to Tirumal Nayak (in the early half of the 17th century) the greatest of the rulers of the Nayak dynasty in South India. Nilakaṇṭha Dikṣita was the grandson of the Appayya Dikṣita's brother. The translations in English and Tamil have been very well done by Y. Mahalinga Śastry, Advocate, himself a scion of Appayya Dikṣita. N. Natesa Ayyar, Advocate, Madura, has contributed a long foreword in English dealing with the works of the poet and their comparative merits.

7. *Śānti-Vilāsa* is another poem of Nīlakanta Dikṣita and has been translated into English and Tamil by the same translator. N. Chandrasekhara Ayyar, Judge, Madras High Court contributes an informing introduction to it.

8. *Viṣṇu-pādādikeśānta-Stotra* is a poem by Ādi-Śaṅkara and as the name indicates each limb of God is described in a stanza. Sir S. Varadachariar, Judge, Federal Court, contributes an interesting foreword and shows how the doctrine of divine personality has a deep significance. God's personality is not imaginary but every part described has at the same time a significance in value associated with Hindu cosmology. Pandit Srīnivāsāchariār and V. Narayana Ayyar are the translators of the poem into Tamil and English respectively.

9. *Śiva-pādādi-keśānta-Stotra and other Stotras*. Śaṅkar has two stotras on Śiva—the *Pādādi-keśānta* and another the *Keśādi-pādānta*. K. S. Ramaswami Śastry, retired District Judge, contributes a long foreword showing how science and reason would reconcile the aspects of God as Saguna and Nirguna and the Rūpas as सावकानुग्रहार्थम्. The definition of Bhakti by Śaṅkara in the *Śivānandalaharī* Stanza beginning with अङ्कोक्तं निजबीजसन्तति etc. includes all phases of Bhakti including the final merging into the Godhead.

10. *Mātṛka-Puṣpamālā-Stuti*.—This is a poem of Ādi-Śaṅkara on Akilandeswari the deity of the Trichy Jambukeswaram shrine. The genuineness of the poem is attested by the fact that this is included in the *Śaṅkara granthāvalī* edited at Srirangam.

11. *Mūka-Pāñca-Satī*.—These are the 500 verses of the poet Mūka of Conjeevaram. They are very popular in South India and the tradition is current that the poet was dumb and that the muse of poetry flowed out of him into the 5 centuries of verses as a result of the grace of Kāñcī Kāmākṣī at the Kāmakoṭi Pīṭham. This poem has now been re-edited when the renovation of the Kāñcī Kāmakoṭi

Piṭham was done after a century by the present Śāṅkarācārya. The poetry is of a very high order and is often difficult to understand. K. Balasubramania Ayyar, Advocate, High Court, Madras, has added an introduction to this latest edition.

12. *Śyāmalā-daṇḍakam* and five other stotras in praise of Ambikā. *Śyāmalā-Daṇḍaka* is the poem popularly attributed to Kālidāsa and it is believed that this was the first heartfelt outpouring of the poet when he was blessed with the poetic muse by the favour of Ambikā. The long compounds add a sonorous beauty to the diction.

13. *Mukundamāla*. This is the devotional poem in praise of Mukunda by the poet Kulaśekhara of the 14th century. T. Sundarachari, Advocate, has translated this poem and has appended useful notes also.

14. *Ābhyaṣaṣṭi* by Ayyavali.—A great Bhakta Venkatesa alias Ayyavali lived at Tiruvasanallur, Tanjore District and the poem is his work in praise of Śiva. A great festival is even now annually celebrated in recollection of his bringing down the holy Gaṅgā into his well. Dr. Raghavan has a very long foreword treating of the other works of the poet and the relation of Bhakti and Advaita to the doctrines of the school of Nāma-Siddhānta emphasised in the poem as a means to salvation.

15. *Devī-Stotra-Ratnākara*. This is a collection of thirteen stotras on Devī including the *Śyāmalā-daṇḍakam* noted above. The devotion to Ambikā is ever on the increase and a popular edition with Tamil meaning is welcomed.

—A. S. Nataraja Ayyar.

NUMISMATIC PARALLELS OF KALIDASA. By C. Śivaramamurti, M.A., published by Shakti Kavyalayam, Madras, Madura, Coimbatore, Tinnevely, with a foreword of Sachivottama Dr. Sir C. P. Ramaswami Ayyar, Dewan of Travancore. xvi—40 pages and 28 figures. Price Rs. Two.

Mr. C. Sivaramamurty now holding a high office in the Museum, Calcutta, has given us the photographic reproductions of 28 coins together with the engravings on them. He has traced the writings on each of these as reminiscent of the verses of Kālidāsa. In fact, this book would show how the greatest poet of India exercised his influence on the kings and dynasties of several epochs of Indian History in the make-up of their mottos on the several coins issued by them. Numismatics is an important science for the re-construction of the history of India and hence the importance of this book cannot be undervalued. Sir C. P. Ramaswami Ayyar, the scholar-statesman and Dewan of Travancore has added a weighty foreword endorsing that the parallels may appear to be ingenious but are indeed convincing. This work is the third of its kind produced by the author, the other two being '*Sculpture inspired by Kalidasa*' and the '*Epigraphical echoes of Kalidasa*' all being useful at once to the Pandit and layman and for the study of the influence of Kālidāsa.

SOUNDARYA-LAHARĪ.—English translation only by P. Sanna Rao, Advocate, Bellary. Published by B. G. Paul and Co. Publishers, No. 4, Francis Joseph Street, Madras, with an introduction by Dewan Bahadur K. S. Ramaswami Sastri, Retired District Judge. pages. 48. Price As. 8.

This is the famous devotional poem of Ādi-Śaṅkarā-cārya. The genuineness of this poem's authorship is attested by the large number of commentaries which all uniformly ascribe the entire poem to Śaṅkara. The tradition states that the 41 verses had always existed as Mantra Śāstra in Kailāsa; and that Śaṅkara brought from there the 41 Ślokas and added his own 59 verses making up the hundred. The translator is to be congratulated

on the beauty of the poetic translation which brings the force of the original. Dewan Bahadur Ramaswami Śāstri, Retired District Judge, contributes an informing introduction tracing the idea of the motherhood of God and how it is a living factor down to the present day.

—A. S. Nataraja Ayyar.

THE ORIGIN OF RĀGA. by Śrīpada Bandyopadhyaya, Head of Music Department, Birla Higher Secondary School, Delhi. Published by the author. Price Rs. 4. pp. viii+104. App. vii with 8 illustrations.

The history of Indian music from the *Sāma-Veda* to the present day is a wide field to cover. The book is divided into 3 chapters followed by an appendix. The first two chapters deal with the age to age progress of the idea of Rāga and the actual form through which it has gone through during the ancient and medieval times and the third is devoted to the explanation of the forms of rāgas as they are practised. It is thus a short historical sketch of our music written in an easy style and is bound to be a handy and useful book of general knowledge of Indian Music. It contains 7 illustrations from the Deccan school of Moghul art. Sanskrit texts also are quoted profusely to explain the theme of the book.

—A. S. Nataraja Ayyar.

GĪTĀLANKĀRA. By Śrīpada Bandopādhyaya, Birla Higher Secondary School, Delhi. Pages 32. Price As. 12.

This is a small booklet meant for the beginners. It deals with the 'Alaṅkāras' which can help the beginners to learn *Svarajñāna*. It is in Sanskrit with explanations in Hindi.

THE GOLDEN JUBILEE SOUVENIR OF THE ADVAITA SABHA KUMBAKONAM—in *Tamil* consisting of 25 essays contributed by various scholars in the Madras Presidency. P. 12

dency. Price Rs. 2-8-0. Published by B. G. Paul and Co., Publishers, Madras.

The attempt in the majority of the 25 essays is to trace and delineate the influence of Advaitic ideas in the vast range of Tamil Literature. It is proved here that Advaita has its aspect of personal devotion to a God with the *nāma* and *rūpa* as would best suit the particular devotee. Quotations are profuse in each essay to show how the Tamil poets had all the bedrock of Advaitic ideas and how the Tamil poets longed for the mystic union with God, the Supreme, knowing and longing for nothing else whatsoever.

The spread of Tamil culture and civilisation in foreign lands especially in Cambodia is the subject of an interesting essay and shows that the worship of Viṣṇu and Śiva was prevalent in Cambodia as early as the 9th century A.D. Another essay shows how the conception of Infinite in mathematics runs through the mantra—पूर्णमिदः पूर्णमिदम् पूर्णान् पूर्णमुदच्यते.

The South Indian Bhaktas of the later Tamil period were great lovers of music and the compositions of Sadāśiva Brahman, Pattinattar, and Thiagayyar are examined to show how their musical pieces have the bed-rock of Advaita. The last essay is devoted to show how Advaita could be instrumental for a better governance of an empire. The book concludes with a list of the admittedly Advaitic works in Tamil including translations.

The best chapter of the work is a catechism of Advaita in 36 pages in the form of question and answer. This chapter owes its inspiration to the Ācārya Swāmigal of the Kāmakoṭi Pīṭham and its accuracy and clarity are all due evidently to his guidance. This has been also reprinted as a separate booklet priced at 5 as. for the benefit of all Tamil lovers.

—A. S. Nataraja Ayyar.

BAUDDHA DARŚANA. By Pandit Baladeva Upadhyaya, M.A., Sāhityācārya, Benares Hindu University. A Foreword by Mm. Pandit Gopinatha Kaviraja. Pages 528. Price Rs.6, 1946.

Pandit Baladeva Upadhyaya has earned a good name by writing books in Hindi. 'This is' a fresh attempt to present to the Hindi knowing public the doctrines of a very important school of Indian Philosophy. 'There has been enough work on this system of thought both here and in the west. But our studies in the original sources show that there is still much work left to be done. It gives me pleasure to say that Pandit Upadhyaya has summed up the results of the studies of the modern scholars in the present book. There is, however, no attempt to consult the original sources and the author has conveniently followed the trodden path in this book. But time has come when we should closely and critically examine the views already put forth with the help of original sources and then put before the scholarly world the real contributions of the school. However, as an attempt in Hindi the book is welcomed and the author deserves our congratulations.

JINARATNAKOŚA.—An Alphabetical Register of Jain Works and Authors, Vol. I, (works). By Hari Damodar Velankar, M.A., Professor of Sanskrit, Wilson College, Bombay. Published by Bhandarkar Oriental Research Institute, Poona; Pages xi + 466. Price Rs. 12-8, 1944.

This is one of the most important achievements of the BORI. For every branch of higher studies it is most essential to have an exhaustive catalogue of both the works and authors. No comprehensive history of literature can be ever written without such catalogues. The present work deals with the Jain works. The compiler Professor

Velankar has made every effort to make his work as exhaustive as possible and it gives me pleasure to say that the work has been quite successful and the author deserves our hearty congratulations for this strenuous work.

DHŪRTĀKHYĀNA. By Haribhadra Sūri. Published by the Bharatiya Vidyabhavana, Bombay as the 19th number of the *Singhī-Jaina-granthamālā*, with a critical study by Dr. A. N. Upadhye. Pages 56+65. Price Rs. 5-8. 1944

The *Dhūrtākhyāna* of Haribhadraśūri of the 8th century A.D. is a typical Prakrit work. It has been for the first time published now. The edition contains the Sanskrit version of it by Saṅghatilakācārya and also a Gujarati Prose rendering of the same. As the title of the book itself suggests it contains stories of rogues who had acquired specific proficiency in the various tricks of their profession. The stories are very interesting and gives an idea of the flight of intelligence of these people. The edition contains all that is desirable and the book is worth reading with all the useful information that it contains. Both the editor and Dr. Upadhye deserve our congratulation for this work.

DIGVIJAYAMAHĀKĀVYA. By Mahopādhyāya Meghavijayagaṇi. Published by the Bharatiya Vidyabhavana, Bombay as the 14th number of the *Singhī-Jaina-granthamālā*. Pages 14+144. Price Rs. 5-12. 1945.

The Bhāratiya Vidyābhavana, Bombay under Shri K. M. Munshi and Ācārya Śri Jinavijaya Muni is doing admirable work by publishing rare and important Jaina texts written both in Sanskrit and Prakrit. The work under review is a Mahākāvya written in Sanskrit on the life of Vijayaprabhasūri of the Tapā Gaccha, by Meghavijayagaṇi, pupil of Kṛpāvijayagaṇi. There are 13 cantos

in it. The verses are very charming. There are beautiful verses describing Agra, Benares, Yamunā, Gangā and Trivenī. Almost all the peculiarities of a Mahākāvya are found in this book. It has been very well edited with an introduction in Gaujarati and short Foot-Notes by Mr. Ambālāla Premchandra Shaha.

MAURYA AND ŚUNGA ART. By Dr. Nihar Ranjan Ray, University of Calcutta. Published by the University of Calcutta. Pages viii+117 with 32 plates. Price Rs. 12-8, 1945.

The book under review is divided into 12 small sections, namely, Social Background, Mauryan Columns, Mauryan Animal figures, Alleged Mauryan sculptures, Mauryan caves, character of Mauryan Art, Aśokan Ideology and Śuṅga Background, Formal qualities of Śuṅga Art, Social Components of Śuṅga Art, Barhut and Bodhgaya and character of Śuṅga Art. All these have been very well discussed and salient features have been clearly brought out by the author. The plates have been very carefully selected to illustrate the main characteristics. The author does not look at the art of these two periods from merely outside, but he wants to enter into the very conditions which led to these arts. So he himself says—"My aim is to read this art in the larger context of life and hence as a related phenomenon, i.e., as one of the aspects of our cultural life in that distant past. . . . My main pre-occupation is therefore not only to study the character of form and technique of these two phases and aspects of our art, but also to study the causes and circumstances that conditioned the life of this art. Frankly, my method is sociological." The author has given life to all the aspects of our art. The book is very interesting and well-written. It has been very carefully illustrated. Dr. Ray deserves high praise for bringing out this fine monograph.

THE BHAGAVADGĪTĀ. Critically Edited by Dr. S. K. Belvalkar. Published by the Bhandarkar Oriental Research Institute, Poona. Pages xxxii + 108. Price Rs. 7-8. 1946.

Dr. S. K. Belvalkar has been connected with the critical edition of the *Mahābhārata* since 1943. But he has been very much interested in the critical edition of the *Bhagavadgītā* for many more years. He has devoted sufficient time and energy to the study of the various problems of the *Gītā* for a long time and has written several articles and notes on these from time to time. While editing the Bhīṣmaparva, he got an opportunity to bring out for the benefit of common readers a reprint of this *Gītā* and wrote a critical introduction, added critical foot notes and several useful and scholarly appendices to the work. All these show the critical acumen and scholarship of the editor. There is no doubt that never before this such a critical edition of the *Gītā* was brought out. All possible available manuscripts of the *Gītā* have been utilised and different readings have been carefully examined by the editor. He has added critical notes and explanations here and there. Indeed Dr. Belvalkar has made every effort to make this edition as complete as possible. This itself gives us an idea of the difficult task which Dr. Belvalkar has taken up in the editing of the *Mahābhārata*. He deserves every encouragement by scholars and by public who should come to his help with substantial donations for bringing out the remaining volumes of the *Mahābhārata*, which I understand, are lying unpublished for want of funds. We should keep in mind that by the publication of these works alone our ancient culture will be preserved. It is indeed a matter of great pity that works like this should suffer for want of funds.

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[Part 2

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[Part 2

**THE NAVYA-NYĀYA THEORY OF PERCEPTION
OF THE ENTIRE DENOTATION AS CON-
NOTATION (SĀMĀNYA-LAKṢAṆĀ)**

By TARA SANKAR BHATTACHARYA

THE Navya-Nyāya admits an extra-ordinary perception of the entire denotation as connotation, *e.g.*, the perception of all jars as jar-hood. Here, the perception of the connotation or the class-essence is sensuous, but the perception of the entire denotation is extraordinary. There is a sensuous cognition of jar-hood, but the cognition of all jars through jar-hood does not come within the range of sensuous cognition. Hence, it is an extraordinary cognition.

Gangeśa defines invariable concomitance (Vyāpti)¹ as the co-existence of the hetu (the probans, or the reason, or the mark) with the sādhyā (the probandum, or the inferent) which is not determined by the determinant of the negatum whose absolute negation exists in the locus of the

¹ *Tattvacintāmaṇi*, Part II, p. 100. "Pratīyogya-sāmānādhikaraṇa-yat sāmānādhikaraṇāntābhāva-pratīyogitāvaccchedakāvaccinnāni yat na bhavati tena samāni tasya sāmānādhikaraṇāni vyāptiḥ." This definition of Vyāpti or the objective invariable relation between the hetu and the sādhyā can be expressed in simpler terms, if we take the help of symbols. If 'h' stands for the hetu and 's' for the sādhyā and 'a' for the object absent in the locus of the hetu, but not present there, then Vyāpti is the co-existence of 'h' with 's' which is not qualified by the essence of 'a'.

hetu but which itself is absent there and thinks that the knowledge of this invariable concomitance (Vyāpti) is the determining condition of inference. Now after discussing the method of apprehension of invariable concomitance (Vyāpti), *i.e.*, the method of induction, he speaks of an extraordinary perception of the entire denotation as connotation (Sāmānya-lakṣaṇā-pratyāsatti). He says in the beginning of his discussions on sāmānya-lakṣaṇā that the apprehension of Vyāpti is with regard to all smoke through the sāmānya-lakṣaṇā pratyāsatti, *i.e.*, through the (extra-ordinary) perception of the entire denotation (of smoke) as the class-essence (smoke-hood)². Mathurānātha's explanation of Gaṅgeśa's statement is that the perception of the co-existence of the generic essences, smoke-hood and fire-hood, gives the apprehension of the co-existence of all smoke with all fire in which smoke-hood and fire-hood respectively inhere³. Here the cognised generic essence or the cognition of the generic essence is equivalent to the cognition of all individuals.⁴ Raghunātha says that in such a case there is a contact of the sense with the generic essence and the object of this sensuous cognition is a universal. Smoke is united with the sense-organ and smoke-hood is the attribute of that smoke, *i.e.*, smoke-hood is cognised to have for its substantive or subject smoke⁵. Here the external sense-organ has a normal connection with the generic essence, but the apprehension of all the individual instances is mental. The apprehension of all atoms through the essence of an atom is a mental cognition.⁶

But objection may be raised that if there is a sensuous contact with the generic essence or the universal, then there

² *Tattvatintāmaṇi* Part II. p. 233.

³ *Mābhūṭi*, Ibid.

⁴ *Jāgadīśi*, Vol. I, P. 333.

⁵ *Dīdhitī*.

⁶ *Ibid.*

would be no perception of the substratum of the non-existence of the jar through the perception of this non-existence, the non-existence or absence of the jar being not a universal.⁷

As a reply to this Raghunātha says that a virtue as such may not be an object of knowledge or may be so. When it is not an object of knowledge, its absence is perceived. When jar-hood as such is not perceived, the absence of the jar is perceived. Here there is a sensuous contact with the absence of the jar, which is a virtue of the place where the jar is absent. But when jar-hood is perceived, its substratum or substantive is the jar which is united with the eye and this perception of jar-hood is the cause of the perception of all jars. Here the perception of the effect is extra-ordinary and that of the cause normal and the cause inheres in its substratum.⁸

But objection may be raised that jar-hood, which is perceived through visual sense to inhere in the jar which is conjoined with it (the usual sense), exists in time relation in time and hence inherence is not the determinant relation of jar-hood.⁹

As a reply to this objection, Raghunātha¹⁰ says that the relation in which the generic essence is cognised in its substratum which is united with the sense organ, is the relation in which the substrata of the generic essence are perceived to contain it. In other words, jar-hood which is perceived to inhere in its substratum which again is conjoined with the eye, is the cause of the extraordinary perception of all jars in the relation of inherence, *i.e.*, there is the extra-ordinary perception of all jars in which jar-hood inheres. This perception of the entire denotation is extra-ordinary, because

⁷ *Jāgadīśi*, Vol. I, p. 337.

⁸ *Ibid.*, p. 338.

⁹ *Ibid.*

¹⁰ *Didbiri*.

it includes the cognition of the past, present and future individuals of the class.¹¹

Thus according to Gaṅgeśa, the (extra-ordinary) perception of the entire denotation through connotation is a fact and the inferential conclusion is arrived at, where it is definitely known that the Pakṣa (the subject of inference) contains the hetu (the reason) as its essence. The inference, "The hill is fiery," is made on the cognition or apprehension that the hill is possessed of smoke as smoke-hood. Indeed, if there is no such extra-ordinary perception of the entire denotation as connotation (sāmānya-lakṣaṇā-pratyāsatti) there would not have been any doubt as to whether smoke is a concomitant of fire or not. In other words, fire is perceived to be related with smoke that is perceived. But an else-where and else-when smoke is not perceived with the senses. So doubt may arise as to whether the else-where and else-when smoke co-exists with fire. Now this doubt is possible, because all smoke can be supernormally perceived through smoke-hood.¹² Had there been no such perception, one would at once conclude that the else-where and else-when smoke does not co-exist with fire. But this negative conclusion is obstructed, because there is an extra-ordinary perception of all smoke being pervaded by all fire through the sensuous cognition of smoke-hood being the concomitant of fire-hood. As a matter of fact, we can make the inferential conclusion, "The hill is fiery," though we do not perceive fire along with smoke which we see on the hill, when we are definite that all smoke is apprehended as smoke-hood which is perceived to inhere in the smoke seen on the hill. But the Mīmāṃsakas think that the inferential conclusion, "The hill is fiery," is possible even without the cognition of all smoke as smoke-hood. They do not

¹¹ *Didbīti*.

¹² *Vide Tattvacintāmaṇi and Mālbūrī, Tattvacintāmaṇi, Part II. p. 283- p. 284.*

recognise the extra-ordinary perception of the entire denotation though they admit the knowledge of the connotation. When smoke is perceived (to co-exist with fire), smoke-hood is perceived to characterise it, *i.e.*, smoke as subject is perceived to have smoke-hood as its predicate and through this smoke-hood, there arises the knowledge of the Vyāpti of fire in smoke in the relation of co-existence (sāmānādhikarāṇya-sambandhena dhūma-niṣṭha-Vahni-vyāpti)¹³ *i.e.*, there arises the normal perception of the invariable relation between smoke and fire and this invariable relation (Vyāpti) is remembered. Now when the Pakṣa (the subject of inference) hill is perceived to have smoke (and not fire), there is a normal perception of the Pakṣa hill as being characterised by Vyāpti or the invariable relation of smoke with fire. In other words, here the perception is specified by the subject or the substantive Pakṣa to have for its predicate or adjective Vyāpti (Pakṣa-Viśeṣyaka-Vyāpti-Viśiṣṭa-Vaiśiṣṭyā-vagāhi-Pratyakṣa).¹⁴ From the perception of this invariable relation (of smoke with fire) being the predicate of the Pakṣa on which smoke, having for its characteristic smoke-hood, is perceived, there arises the inference that the hill is fiery. The special point to be noted here is that this view admits a normal perception of Vyāpti or invariable concomitance, but does not admit a supernormal perception of the entire denotation. The invariable relation between smoke and fire is normally perceived, as the perceived smoke has for its characteristic smoke-hood. But the entire denotation of smoke, *i.e.*, all smoke is not supernormally perceived.

Thus the Mīmāṃsakas admit a normal perception of Vyāpti as being a characteristic of the Pakṣa, but not a supernormal perception of the entire denotation. But even if the perception of Vyāpti as being a predicate of the Pakṣa is not admitted, inference can be made without the

¹³ *Mādhuri*, *ibid*, p. 272.

¹⁴ *Mādhuri*, *Tattvacināmaṇi*, Part II, P. 272

recognition of the extraordinary perception of the entire denotation. In the perceived smoke (which is perceived to co-exist with fire), there is the apprehension of the co-existence of smoke with fire through smoke-hood which is a characteristic of the perceived smoke. Now, when smoke is perceived in the Pakṣa (in the pakṣa or the subject of inference, smoke is perceived, but not the sādhya or the inferent fire), there is the recollection of the Vyāpti or invariable relation between smoke and fire through smoke-hood that abides in smoke. After this there arises the inference that the hill is fiery.

Thus the determining condition of the inferential conclusion is either the perception of Vyāpti as a predicate of the Pakṣa or the remembrance of Vyāpti on the perception of the hetu (the reason) in the Pakṣa. In any case, the extra-ordinary perception of the entire denotation is not a fact.

But this objection is not tenable, because the doubt as to whether the smoke of some other place or time is the concomitant of fire, is possible, since all smoke is (super-normally) perceived through the sensuous cognition of smoke-hood as inhering in the perceived smoke.

But objection may be raised that if the sāmānya-lakṣaṇā-Pratyāsatti is admitted, then a man would be omniscient, since all knowables or objects would be cognised, through knowability or object-hood.

The reply to this objection is that even if all objects were known through object-hood, these objects would not be cognised in detail, *i.e.*, the specific nature of objects would not be known and hence a man would not be omniscient.¹⁵

Thus an extra-ordinary perception of all the individuals of a class through the class-essence (sāmānya-lakṣaṇa-

¹⁵ *Siddhānta-Muktāvalī*: Na ca sāmānya lakṣaṇāsvikāre prameyatvena sakalaprameyajñāne jāte sārvaajñāpattiriti vācyam. Prameyatvena sakala prameye jñāte'pi viśiṣṭa-sakala-padārthānāmajñātatvena 'sārvaajñānābhāvāt.

Pratyāsatti) is recognised in the Nyāya system and this sāmānya-lakṣaṇā of the Nyāya is close to what some modern logicians call Intuitive Induction. It is admitted by some logicians of the present day that the immediate apprehension of one instance may be the apprehension of all such similar instances. In the words of Johnson, "We intuit the truth of a universal proposition in the very act intuiting the truth of a single instance."¹⁶ The same writer further remarks that when we speak of intuitive induction, the term "intuitive" implies "felt certainty on the part of the thinker" and there is a realisation that "what is true of one instance will be true of all instances of that form."¹⁷ When we realise that "a single presented object, whose shape is perceived to be equilateral and triangular, is also equiangular, we are implicitly judging that all equilateral triangles are equiangular."¹⁸

Thus the sāmānya-lakṣaṇā-Pratyāsatti of the Nyāya is akin to the intuitive induction of modern Logic. There is, however, distinction between the two. In the Nyāya, the entire denotation is cognised through a sensuous perception of connotation. But in the intuitive induction of modern logic, the entire denotation is apprehended in the apprehension of one individual instance. In the former, in the perception of the connotation there is the extraordinary perception of the entire denotation; in the latter, all instances are cognised in cognising one instance and not in cognising the common essence of these instances. Thus the Nyāya admits the sensuous perception of the universal and an extra-ordinary perception of all the substrata of the universal; the Mīmāṃsakas think that the perception of the universal is possible, but the extra-ordinary perception of all the substrata of the universal, *i.e.*, the perception of the

¹⁶ Johnson: *Logic*, Part II, p. 29.

¹⁷ *Ibid.*, p. 192.

¹⁸ *Ibid.*, p. 193.

entire denotation, through the perception of the connotation, is not possible; Johnson holds that the immediate knowledge of the entire denotation is possible, but the perception of the connotation is not the cause of this knowledge of the entire denotation.

Another important distinction crops up in connection with the Nyāya view of *sāmānya-lakṣaṇā*. According to Navya-Nyāya the knowledge of Vyāpti or invariable relation between the hetu (the probans) and the sādhyā (probandum) is the determining condition of an inferential conclusion. The ground of the inference, "The hill is fiery," is the objective universal proposition, "All smoky objects are fiery" and this invariable co-existence of all smoke will be all fire is (supernormally) perceived. In the Aristotelian syllogism the universal proposition need not be objectively true and hence the question of its perception does not arise. In fact, the Aristotelian formalistic syllogism is very different from the Nyāya inferential reasoning. The conclusion of the Nyāya inferential reasoning must be materially true and accordingly all the steps of it must be objectively valid. The Nyāya inferential reasoning, when expressed in the fully logical form, consists of five steps each of which is materially true. The Aristotelian syllogism, on the contrary, consists of three propositions all of which may be materially false. The Nyāya inferential reasoning comprises five steps simply because it aims at the material validity of the inference. As a matter of fact, none of these five steps is superfluous. A, for example, shows B smoke on the yonder hill and tries to convince him by argument that there is fire on the hill. In the first place, A asserts that he will prove that the hill has fire (*Prātijñā*) in order that B may definitely know what A has to prove. This assertion has a psychological effect on B. He makes up his mind to follow the reasonings of A. But when A asserts that the hill has fire, B may enquire the reason of it and accord-

ingly A gives the reason. So the next step is : "For there is smoke" (hetu). But after this B may think : "Why should there be fire, even though there is smoke?" Thus naturally, the third step is : "Wherever there is smoke, there is fire, e.g., the kitchen" (Udāharaṇa). But again B may think that though the kitchen has the co-existence of smoke and fire, the hill may not have the same. So he is reminded that the hill has smoke which is the invariable concomitant of fire (upanaya). After this A definitely asserts that the hill has fire (nigamana).

In the next place, the middle term is instrumental to the syllogistic conclusion in Aristotle. But in the Nyāya, the determining condition of inference is the knowledge of Vyāpti (the view of the Navya-Nyāya), or the cognition of the concomitant as characterising the Pakṣa (the view of the Old School). In fact, in Aristotle the middle term need not be perceived in the minor term.

Lastly, the Nyāya inferential fallacies are all material. There is no place in it for the purely formalistic fallacy. The fallacy of Four Terms, for example, is sometimes a purely formal fallacy in Aristotelian syllogism. The syllogism, "India comprehends Bengal, Asia comprehends India, therefore Asia comprehends Bengal," is involved in the fallacy of Four Terms. But the argument is materially true. So this fallacy can have no place in the Nyāya system.

A RARE MANUSCRIPT OF RĀMACANDRA-
CANDRODAYA, AN UNKNOWN MĪMĀMSĀ
WORK BY BĀLA GĀDEGILA (BETWEEN
A.D. 1675 and 1775)

By P. K. GODE

IN the Rajapur Pāṭhaśālā Sanskrit Manuscripts Collection there is a small collection of Mss. called the Shevaḍe¹ Collection acquired in 1931. Through the favour of my ever alert friend Pandit Raghunatha Śāstri Patankar in charge of the above collection I could get for examination a rare Ms. of a *Mīmāṃsā* work called the *Rāmacandra Candrodaya* composed by one “बाल गाडेगिल” or Bālaśāstri Gāḍgil. The Ms. consists of about 77 folios² on thin and worn-out country paper. The size of the Ms. is 9 $\frac{1}{4}$ ins. by 4 ins. Each folio contains about 11 lines, each line containing about 33 letters. The Ms. appears to be about 150 years old. It begins as follows :—

“श्रीगणेशाय नमः ॥

श्रीरामापितसर्वस्वः श्रीरामाभिप्रासवतः ।

मीमांसाभाट्टगुप्तार्थान्विवृणोमि ययामति ॥ १ ॥

धातुतद्धृतकारकायः संखेर्वैनिरूपितः ।

गाडेगिलेन बालेनावशिष्टार्थो निरूप्यते ॥ २ ॥

¹ The Mss. in the Shevaḍe Collection bear the following printed label :—

“बिखारेंगोठवेंगामनिवासिभिः शोबडोपाह्वैः श्रीगोविंदशास्त्रितनुजैः शिवराम-
जननिर्वाहभूतस्य स्वपितुः स्मरणार्थं पितृसंगृहीतोऽयं ग्रन्थः परमप्रीत्या समर्पितः शके
१८५३ मार्गशीर्षमासे” ।

² All the folios are damaged at one corner by moths ; some portions of the text on each folio have thus been lost.

धर्मो ह्यवशकलित्वायुक्तो जैमिनिना स्फुटः ।
 अवातो धर्मजिज्ञासेत्यादिना विबुधोमि तं ॥ ३ ॥
 शीतकांघ्रिं समुत्सृज्य जडवेवेस्तु कौस्तुभः ।
 बलाबलाधिकरणपर्यतः प्रकटीकृतः ॥ ४ ॥
 मीमांसाब्जे जडवेवेद्यावान् कौस्तुभ उद्बुधतः ।
 ततोऽवशिष्टं श्रीबाल उद्धर्तुं यततेऽधुना ॥ ५ ॥
 श्रीरामाप्रयावपर्णाय मीमांसाह्याद्रिकौस्तुभा ।
 मीमांसाब्जेऽद्वरति बालो गाडेगिलोऽधुना ॥ ६ ॥
 बिनयो गुह्यसंप्रदायसिद्धो
 गुह्यगुह्यैरजिलैरवाप्यते ।
 कुकुमार कुमारिलीय वा
 रचनेनैव मया स दध्यते ॥ ७ ॥
 तद्विद्वांसानुगृह्णुतु चित्तधोत्रैः प्रसादिभिः ।
 संतः प्रणयवाक्यानि गृह्णुति ह्यनसूयवः ॥ ८ ॥
 न चात्रातीव कर्तव्यं बोधदृष्टिपरं मनः ।
 बोधोद्भविसमानोपि तच्चित्तानां प्रकाशते ॥ ९ ॥
 कुतो वा गृह्यते बोधं सूरयो मद्विषोक्तिषु ।
 नेष्यते यः परस्यापि स स्वयं गृह्यते कथं ॥ १० ॥
 निर्दोषत्वेकवाक्यत्वं न च वा लोकस्य दूषयते ।
 सापवादामतः केचिन्मोक्षस्वर्गावपि प्रति ॥ ११ ॥
 आगमप्रवणश्चाहं नापवादः स्तलन्नपि ।
 नहि सत्त्वर्त्तना गच्छन् स्तलितेष्वपीच्छते ॥ १२ ॥
 यथा कथंचिद्वारब्धा त्रयीमार्गानुसारिणी ।
 बागवत्तिरूपसारापि अद्वयानस्य शोभते ॥ १३ ॥
 मीमांसाशास्त्रतेजोभिर्विशेषेणोद्बलीकृते ।
 वेदार्थज्ञानरत्ने मे तुष्णातीव विबुं भते ॥ १४ ॥
 गाडेगिलेन बालेन लिखित पंडितोत्तमैः ।
 शोधनीयं विचार्यैव भूष्यं च सुविचारतः ॥ १५ ॥

अवातो धर्मजिज्ञासा अथ वेदाध्ययनानंतरं etc.,

The Ms. contains references to a few works and authors as follows :—

- (1) जडवेव and his कौस्तुभ—fol. 1 ; (2) जैमिनि—fol. 1, 2.
- (3) कुमारिलीय fol. 1 ; (4) बाल गाडेगिल (author) fol. 2 ; (5) कापिलज्ञानम् fol 2 ; (6) भाष्यवार्तिक fol. 8, 11, 13, 71 ; (7) भाष्यकार—fol. 9.
- (8) भगवान् सूत्रकारः—fol. 10 ; (9) शास्त्रदीपिकायाम्—fol. 10 ; (10)

न्यायसुभाकारः—folio 11 ; (11) पार्श्वसारथिना folio 12, 31, 40, 55 ; (12) वार्तिककृद्भ्यः folio 12, 23, 25, 52, 55 60 75 ; (13) विष्णुपुराणे— folio 13 ; (14) योगिमाहेश्वरादीनां मतं—folio 18 ; (15) महाभाष्योक्तेः folio 24 ; (16) बौद्धैः—folio 27 (“बीबीतरंगादिन्याय”), 29 ; (17) नैयायिकानाम्—folio 28, 37, 40 56 ; (18) तार्किकाः—folio 35, 43 ; (19) भवदेवीयाः—folio 40 ; folio 41—Colophon :—“इति श्रीमत्परम . . . श्रीरामचंद्र . . . शिष्येण . . . विरचिते . . . प्रत्यक्ष . . . संपूर्णः ॥ अद्यानुमानं निरूप्यते” (the name “तर्ककौस्तुभः” is written in the margin near the Colophon) ; (20) वार्तिके—folio 41 ; (21) भाष्ये—folio 42 ; (22) तर्कभाष्ये—folio 45 ; (23) न्यायरत्नमालायाम्—folio 47 ; (24) वैशेषिकाः—folio 43 ; Folio 54—“अथोपमानं निरूप्यते । उपमितिकरणमुपमानं” Folio 60—“अथार्थापत्तिं निरूप्यते ।” Folio 70—“इत्यर्थापत्तिः ॥ अद्यानुपलब्धि- निरूप्यते ॥” (25) भगवान् पतंजलिः—folio 73. Folio 77 (a) “इति श्रीमद्रामचंद्रचंद्रोदयेऽनुपलब्धिनिष्कर्षः संपूर्णः ॥”—folio 77(b)—“अथ शब्दो निरूप्यते” The Ms. breaks on this folio and ends with the words “... बुधोमही...”—

From the foregoing data gathered from this Ms. we get the following information:—(1) The author of this *mīmāṃsā* work is “बाल गार्हेगिल” (See verses 2, 6, 15). (2) The name of the work is “रामचंद्र चंद्रोदय” as stated in the Colophon on folio 77 (a). The name “तर्ककौस्तुभ” has been recorded in the margin near the colophon on folio 41. (3) The author may have been a pupil of “श्रीरामचंद्रसरस्वतीपूज्यपाद” as stated in the Colophon on folio 41 and as appears from the name of the work viz. “रामचंद्रचंद्रोदय” recorded in the colophon on folio 77 (a). Some later hand has scratched out the expression “सरस्वतीपूज्यपाद” from the Colophon on folio 41 viz. “श्रीरामचंद्रसरस्वतीपूज्यपादशिष्येण etc.” (4) The present work “रामचंद्रचंद्रोदय” was composed by बाल गार्हेगिल with a view to supplementing the work of सण्डवेव viz. कौस्तुभ or श्रीमांसा—कौस्तुभ) (verse 2 “अवशिष्टार्थो निरूप्यते” and verse 5 “अवशिष्ट उद्धर्तुं यतते”). Perhaps this statement is responsible for the title “तर्ककौस्तुभ” entered by a later hand on folio 41. (5) Verse 1 at the beginning uses the expressions, “श्रीरामापितसर्वस्वः” and “श्रीरामाभिप्रसादतः” which may suggest

that the author was a devotee of God श्रीराम and a pupil of a *guru* of the name श्रीराम. The title "रामचन्द्रप्रबोध" is in harmony with this suggestion.

As the present work mentions the great *mīmāṃsaka* of Benares, viz., Khaṇḍadeva and his work "*Kaustubha*," it is later than him. In my paper on the "Chronology of the works of Khaṇḍadeva" in the *D. R. Bhandarkar Volume I* have recorded the following dates of Khaṇḍadeva and his works :—

A.D. 1641—Date of a Ms. of his भाट्टवीपिका.

A.D. 1657—Signature of Khaṇḍadeva on a निर्णयपत्र drawn up at मुक्तिमंडप at Benares.

A.D. 1660—Date of a Ms. of his बीमांसाकोस्तुभ at the B.O.R. Institute.

A.D. 1664—Date of India Office Ms. of भाट्टवीपिका.

A.D. 1665—Date of Khaṇḍadeva's death recorded by his pupil शम्भुभट्ट in A.D. 1708.

In view of the above chronology we may safely conclude that *Bāla Gāḍegila*, the author of the *Rāmacandra-Candrodaya* is later than A.D. 1665 and is possibly earlier than A.D. 1800 in view of the age of the Rajapur Ms. of the *Rāmacandra-candrodaya* as observed by me already in this paper. Accordingly we may tentatively put *Bāla Gāḍegila* between say A.D. 1675 and 1800.

The surname "Gāḍegila" is current among the Chitpāvan Brahmins of Mahārāṣṭra at present. As *Bāla Gāḍegila* does not record his parentage or other particulars about himself or his family it is difficult to identify him. However, let me attempt his identification on the strength of Maratha records of the period, A.D. 1700 to 1800.

The Gujarati poet Deva Śaṁkara in his *Alaṁkāramāñ-jūṣā* (edited by S. L. Katre, Ujjain, 1940) refers to an eminent Paṇḍita of the name "बालकृष्णशास्त्रि" (highly honoured by Peshwa Madhav Rao I) in the following verse :—

“अयं न ज्ञेयो न गुर्वनं मिथो

न चाक्षिपात्तापि सुरेशबन्धः ।

सुपूजितो नाथवरायराजा

श्रीबालकृष्णामिषशास्त्रि एषः ।”

For identifying the *Bālakṛṣṇasāstri* of the above stanza myself and Mr. Katre searched in contemporary records. The result of this search is recorded by Mr. Katre in *Appendix B* (pp. 289-297) of his edition of the *Ālamkā-rāmāñjūṣā*. The name-sakes of *Bālakṛṣṇa Śāstri* found in contemporary records are as follows :—

(1) *Bālakṛṣṇa Dīkṣita Pāṭaṅkar*, holding great influence with the Peshwas.

(2) A list dated 10-8-1773 (*Peshwa Daftar* Vol. 32, Pages 107-112, Document No. 192) mentions charities given away by Ramābāī, wife of Peshwa Mādhav Rao I prior to her committing *Satī*. This list mentions one बालकृष्णशास्त्रि to whose wife some jewels were given away by Ramābāī.

(3) Peshwa Daftar Vol. 43, Page 33-Documents No. 38 dated 3-4-1772 addressed to Peshwa Madhava Rao I is a letter by one Kuppā Śāstri of Kumbhakona, in which he binds himself not to carry on medical practice in future.

This document is endorsed by witnesses among which we find the signature of one *Bālakṛṣṇa Śāstri Jānārdan Śāstri Gādegila* ” as follows :—

“साक्षी—

बालकृष्णशास्त्री जानार्दनशास्त्री गाडेगिल नृसिंहशास्त्री काशीनाथशास्त्री विवेकर” etc.;

(4) *P. D. Vol. 32, Document No. 191* dated 3-6-1773 is a list of Charities given away at the *Satī* of Ramābāī to persons of Peshwa’s royal circle. This document shows a recipient “लक्ष्मीबाई गाडेगील” receiving Rs. 2000. Mr. Katre suggests by way of a guess that this *Lakṣmībāi Gādegila* may have been the wife of बालकृष्णशास्त्रि गाडेगिल referred to above.

(5) Grant Duff in his *History of the Marathas* (4th Edn. 1878), Vol. I, Chap XXI, Page 623 mentions one “Bāl

Kishen Gargeel "as head of the Poona Nyadeiish, or Court of Justice." associated with Bālāji II, who appointed him about A.D. 1749 as his first न्यायाधीश or Chief Justice. In 1759 Rāma Śāstri Prabhūne succeeded this Bāla Kṛṣṇa Śāstri.

I am concerned in the above references with the name sakes of "बाल गाडेगिल", the author of the *Rāmacandra Candrodaya* (see Nos. 3 and 5 above). In particular the form of the surname "गाडेगिल" in the signature "बालकृष्णशास्त्री जानार्दनशास्त्री गाडेगिल" on a document of 3rd April 1772 is exactly identical with that recorded by the author of the *Ramacandra Candrodaya*, who calls himself "बाल गाडेगिल" in three different verses in the introductory portion of the work. If this identification is accepted we are led to conclude that the author of the *mīmāṃsā* work before me in the form of the Rajapur Ms. was living in A.D. 1772, presumably as a highly respected old Paṇḍita at Poona. Whether this *Bāla Kṛṣṇa Śāstri Gādegila* is identical with "Bāl Kishen Gargeel," the *Nyāyādhīśa* of the Peshwa, say between A.D. 1749 and 1759 as stated by Mr. Katre, cannot be definitely determined at present.

It is difficult to say what other Sankśrit authors of the Gāḍgil¹ family flourished before A.D. 1800. I know only one such author viz., Vaidyanātha Gāḍgila, the author of a commentary on the *Tarka-Samgraha* of Annambhaṭṭa, called the *Tarkacandrikā* represented by Ms. No. 736 of 1882-83 (folios 37) in the Government Mss. Library at the

¹ I note some names of persons of the Gāḍgil family, which I noticed while studying the subject of the present paper :—

(1) A *Sammātipatra* of Benares Pandits dated 1865 A.D. bears the signature "गाडगीलोपाध्व सीतारामशर्मणः." (See p. 34 of Appendices to R. B. Gunjekar's, *सरस्वतीमंडल*, Bombay 1884).

(2) See *पेशवाधि सावलीत* by N. G. Chapekar (1937), pp. 114 (गाडि) केशवभट्ट, 84; कोंडोजीबाजी, 258.—"केशवभट्ट" गाडगील सातारकर" (p. 84) is referred to in a document of A.D. 1777. Other persons are of later date.

B. O. R. Institute, Poona. This Ms. was written in Śaka 1644 (=A.D. 1722) by one Jayarāma. The Colophon of the Ms. reads as follows :—

“इति श्रीगङ्गिलोपनामक रामकृष्णभट्टात्मजवंशनाथभट्टकृततर्कचंद्रिका स ॥६॥”

It is clear from this colophon that the author of this commentary is *Vaidyanātha Rāmacandra Gaḍgila*, who is evidently earlier than A.D. 1722, while *Bāla Gaḍgila*, the author of the *Mīmāṃsā* work *Rāmacandra-Candrodaya* is later than A.D. 1700. In what way *Vaidyanātha* is connected with *Bāla* cannot be determined at present. I hope some members of the *Gaḍgil* family, who may be interested in the history of their family, will try to trace in their genealogies these two *Gaḍgila* authors, one of whom belongs to the 17th century, while the other belongs to the 18th century.

AUTHORSHIP AND DATE OF THE BHĀRATA EPIC AND THE BHAGAVADGĪTĀ

By P. C. DIVANJI

I. Introductory Remarks.

THE *Bhagavadgītā* is looked upon in India as a work of special importance from a time prior to the time of Śaṅkarācārya because in his *Bhāṣya* on III. 2. there is a reference to an earlier commentary thereon establishing the view that it advocates the doctrine that freedom from transmigration can be achieved by following the path of knowledge combined with that of action (Jñāna-Karma-śamuccaya). It has accordingly been imitated and commented upon by several persons. But the Orthodox School of Indians studied it only from the point of view of the teaching contained therein. In the west it was unknown till Charles Wilkins translated it into English in 1785 at the instance of the East India Company. Still it was not until Schlegel, a German scholar, edited it critically in 1823 with a Latin translation that it attracted the attention of the western scholars. One of them, Humboldt, was so much pleased with it that he acclaimed it as "a work far above Lucretius and even above Parmenides and Empedocles" and declared that "this episode of the *Mahābhārata* is the most beautiful, nay perhaps, even the truly philosophical poem which we can find in all literatures known to us." Since then it was translated into all the European languages and even into the Japanese.¹ The persons who translated them were in many cases eminent classical scholars and therefore

¹ M. Winternitz, *History of Indian Literature*, Vol. I. pp. 426-27.

prefixed to their editions introductions written from a critical point of view.

The earliest study of the work from the same viewpoint made by an Indian scholar seems to be that of Mr. K. T. Telang who translated it into English for the *Sacred Books of the East Series, Vol. VIII*. Amongst other questions, he has in his introduction thereto considered that of the probable date of the composition of the work and recorded his conclusion that the said date must be earlier than that of the *Dharmasūtra of Āpastamba*, which Bühler had, in his Introduction to the translation of that work in the same series (Vol. XIV) placed it in about the 4th or 5th century B.C. He had treated the work as a homogenous one. As opposed to him, Holtzmann, a European scholar propounded the view that the work contained clear evidence as to its being a work of two authors, one of whom expounded the philosophical doctrine of the Sāṃkhyas and the other the Bhakti doctrine of the Bhāgavatas and that whereas the original *Gītā*, even then an episode in the Bhīṣmaparvan, had been composed for the former purpose only, the present one is a revised edition thereof with the doctrine of the Bhāgavata cult loosely grafted on at that time to the original work. Bothlingk, though willing to accept the former conclusion doubted the correctness of the latter and considered "an unprejudiced examination of the philosophical contents of the *Bhagavadgītā*" by one well-acquainted with the Indian philosophical systems necessary with a view to ascertain whether it was the philosophical portion that was the original or the devotional one. Professor Garbe, believing himself to be properly qualified for such an examination, made it and embodied the result and the arguments in support thereof in his Introduction to his German translation of the work published about the end of the first quarter of this century. The translation was not of the whole work but of select stanzas thereof which,

according to the translator, must have formed the original *Gītā*, while the translation of the remaining stanzas was printed as if it were of an extraneous portion of the work. The stanzas translated in the former group are those which hold forth devotion to Bhagavān Vāsudeva as the means for the attainment of freedom from the bondage of Samsāra and of the highest bliss and peace of mind while those translated in the latter are those in which knowledge and meditation have been held forth as the means for the attainment of the same end. He did so because he was of the view which was quite opposed to that of Holtzmann. He supported this by tracing the history of the Bhāgavata religion which in his view originated earlier than the Sāṅkhya, Yoga, Vedānta and Karma-mīmāṃsā doctrines, which, in his view had been drawn upon by the reviser for establishing a synthesis between them. Agreeably to this view he put down the work in its present form in the 2nd century A.C. and that in the original one in the 2nd century B.C.² Sir R.G. Bhandarkar, though agreeing with the view that the *Gītā* had been originally composed for providing a canonical work for the followers of the Bhāgavata or Sātvata religion, does not agree in looking upon the work in its present form as a revised edition of an original shorter work and treats it as a work which had remained in the same form in which it had been originally composed, and fixed for it a date later than the beginning of the 4th century B.C., though he could not say how much earlier than that it must be.³ Professor Edgerton of America too has thought over the question of date and advanced the guarded view that it may have been composed before the Christian Era but not much before it and Dr. Winternitz having considered all the above

² This Introduction though originally written in German was latterly translated into English by Dr. N. B. Udgar of Poona. For the above view see pp. 30-33 of that Translation.

³ *Vaiṣṇavism, Śaivism and other Minor Sects*, p. 18.

views has expressed his agreement with the last view⁴ which is the vaguest of all.

II. *Authorship of the Work.*

It seems to me very strange that none of the said Indian or European Scholars has entered into a discussion about the question of the authorship of the work. Telang has referred to it only passingly on p. 6 of his Introduction. In my view that question is so very intimately connected with that of the date of the work that any conclusion arrived at as to the latter must, in order to be acceptable, be consistent with the *Gītā* being the work of an author who can be proved to have lived about that date. It would not be reasonable to hold forth a date as correct even though it may not be possible to support it by reference to the existence about that time of a person who can probably have been its author. Even according to the orthodox tradition this is a work of the Smṛti not the Śruti class and therefore one which had a human author. Not only that. It is according to it the work of a definite individual sage named Vyāsa. The critics of the modern historical school must be deemed not to have come across any evidence which would raise a reasonable doubt as to the correctness of that statement found uniformly in all the manuscripts of Ādiparvan of the *Mahābhārata*. A merely general doubt as to the authorship of all the works of the pre-classical period would not be entitled to much weight in the case of the *Gītā* at least because even the scholars who look upon the work in its present form as a revised edition of an older work, have, on a critical examination thereof, come to the conclusion that the original *Gītā*, as to whose contents they do not agree, must have formed part of the original Bhārata Epic.⁵ Therefore,

⁴ H. I. L. p. 438, f.n. 1.

⁵ Garbe's Introduction to the *Bhagavadgītā* as translated by Udgikar pp. 4, 12-13.

leaving aside for the time being the question whether the *Gītā* as we have it since the time of Śaṅkara is or is not in the same form in which it was composed by the author of the *Bhārata Epic*, we can confidently say that it is the work of a sage named Vyāsa. The only questions that therefore remain for investigation are:—(1) the identity of that sage and (2) the time when he can be reasonably believed to have lived.

As regards the first, the *Ādiparvan* of the *Mahābhārata* leaves very little room for a doubt because besides stating the name Vyāsa it also gives his personal name as Kṛṣṇa Dvaipāyana or simple Dvaipāyana. This sage was of course none other than Vyāsa (literally meaning the arranger) who collected together the Vedic hymns and arranged them in the form of the *Saṁhitās* of the four Vedas. It, too calls itself a *Saṁhitā* of the *Bhārata-Itihāsa*.⁶ In another *Parvan* of the same *Epic*,⁷ he is spoken of as having been born of Satyawatī by the sage Pārāśara of the Vāśiṣṭha Gotra. Therefore even though it is true that there had been several Vyāsas⁸ and though *Saṁhitās* of the first three Vedas had been compiled by other Brahmanas also,⁹ there is no difficulty in identifying the author of the *Bhārata Epic* and therefore also of the *Bhagavadgītā* in their original forms.

III. *Veda Vyāsa and Bādarāyaṇa Vyāsa Distinguished.*

The question of the identity of the Vyāsa of the *Bhārata Epic* has become somewhat confounding only because the *Bhāgavata Purāṇa* treats the said sage as identical with Bādarāyaṇa and calls his son Śuka Bādarāyaṇī.¹⁰ The basis of this identification seems to be that the former had, according to that *Purāṇa* itself, been living in a hermitage situated in the midst of Badara or Badri (jube) fruit trees situated on

⁶ *Mahābhārata*, Critical Edition, Poona, I. 1. 18-19.

⁷ Śāntiparvan, III. 177. 2-5.

⁸ *Viṣṇupurāṇa* III. 3; *Yogavāśiṣṭha* II, 3. 21-31.

⁹ Pargiter, *Ancient Indian Historical Tradition*, p. 316.

¹⁰ *Bhāgavata Purāṇa*, I. 1. 7; 4. 14-25 XII. 6. 8-80.

the bank of the river Sarasvatī.¹¹ The clearest proof of their being two distinct personalities living in two ages separated from each other by a long distance of time is however afforded by the fact that the smṛti referred to in *Brahmasūtra* I. 2. 6 ; 3. 22 ; II. 3. 45 ; III. 2-17 and IV 1-20, is, according to Śaṅkara and the other three Ācāryas, the *Bhagavadgītā*. He is believable in that respect because he has supported this identification by actually quoting stanzas from the work which can be found therein at XVIII. 61, XIII. 2, XV. 6, 12 ; XV. 7 ; XIII. 12 and VI respectively. He, and according to Telang the other Ācāryas also, has made it clear that the word "*Brahmasūtra*" forming part of the compound word "*Brahmasutrapadaih*" in XIII. 4 does not refer to the Śarīrakasūtra but to the cryptic sentences of the Upaniṣads.¹² And they seem to be right because the said Sūtra work could not have been composed earlier than *Bhagavadgītā*. That this must be in the mind of Śaṅkara when he gave that explanation is clear from the fact that he refers in his *Bhāṣya* on the Sūtra to the two sages by different appellations. Thus in his *Bhāṣya* on *Brahmasūtra* I. 3-29, 33 ; II. 1.1, 3. 29, 47 and III. 3.32, he speaks of the author of the Great Epic and the Saṁhitās as the sage "Veda Vyāsa" "Vyāsa," and "Dvaipāyana" while in that on I. 1-2 ; II. 1. 14, 37, 42 ; III. 1.1 ; 3. 28, 57 ; 4.1, 19 ; IV 1-12, 17 ; 2. 1, 3. 2. 14, 4.7 he speaks of the author of the *Brahmasūtra* as "Bhagavān," the "Sūtrakāra" and an "Ācārya," never as a Ṛṣi (sage). The Sūtra itself refers to its author's views as distinguished from those of the other thinkers of the Mīmāṃsā School, which was not till then sub-divided into the Pūrva and Uttara Mīmāṃsās, by the name 'Bādarāyaṇa' in I 3. 26, 33 III. 2-41, 4. 1, 8, 19 ; IV 3. 15, 4.7, 12, and not even once as Dvaipāyana Vyāsa whose Smṛti has

¹¹ *Op. cit.* I. 7. 1-2.

¹² *Br. Śā.*, II. 3. 47 ; III. 1. 14 and Śaṅkara's *Bhāṣya* thereon (N.S.P. edition pp. 624, 673).

been twice drawn upon in the Sūtra for supporting the author's view.¹³ According to a well-established tradition again Veda Vyāsa had, after compiling the Samhitās of the Veda and the Āitihāsika tradition taught those of the *Kṛṣṇa Yajurveda* and the *Bhārata-Itihāsa* to Vaiśampāyana as he taught the others to other pupils of his. This Vaiśampāyana had again taught the Samhitā of the said Veda to his nephew and pupil Yājñavalkya Dairavātī, who afterwards quarrelled with his Uncle, vomitted out the Samhitā and Tittira birds picked it up¹⁴ and he himself propitiating the Sun was able to compose some new mantras and to compile his own *Śveta Yajurveda Samhitā* which was taught to and preserved by the Brāhmaṇas of 15 new Śākhās and also composed through his pupil Kātyāyana the major portion of the *Śatapatha Brāhmaṇa*. That being so, Dvaipāyana must have lived at least 50 years earlier than the age in which Yājñavalkya lived and the *Bhārata Samhitā*, of which the *Gītā* formed a part compiled by the former must be of an earlier date than the *Yajurveda Samhitā* compiled by the latter, and also than the *Bṛhadāraṇyaka* and *Iśa Upaniṣads*, in the former of which Yājñavalkya is the chief exponent of the nature of the Ātman and Brahman and the latter of which forms the 40th Adhyāya of the said Samhitā. Moreover, in the pedigree given in *Bṛhadāraṇyaka Upaniṣad* as to how the Mantra doctrine had been handed down, Yājñavalkya Vājasaneyin is mentioned as a pupil of Uddālaka Aruṇi.¹⁵ This Yājñavalkya is the same who was the nephew of Vaiśampāyana because he is distinguished as Vājasaneyin, i.e., the one to whom the *White*

¹³ *Bhā. Pu.* XII. 6. 52; Pargiter, *A. IHT.* pp. 321-25.

¹⁴ This allegorical story found in the *Bhāgavata* and other *Purāṇas* seems to indicate that the Samhitā which was till then the monopoly of Yājñavalkya was taught by him to Brāhmaṇas of the Tittiri Śākhā and was never again recited by him because he had quarrelled with his uncle who had taught it to him.

¹⁵ *Br. A. Upa.* VI. 3-7.

Yajurveda mantras were revealed by the Sun whose vehicle is a horse. And that Uddālaka Aruṇi had learnt the Pañcāgni-Vidyā and the secret about the Devayāna and Pitryāna from a Kṣatriya prince named Pravāhaṇa Jaivalī¹⁶ who was a contemporary of Janamejaya III and Śatānika, son and grandson respectively of Parikṣita II who succeeded Yudhiṣṭhira¹⁷ and of Aśvapati Kekaya.¹⁸ He was also a pupil of Ayoda Dhaumya, who lived in the times of Parikṣita II and Janamejaya III, Śvetaketu Auddālaki Gautama, who was most probably the author of the earliest Dharmasūtra known as the *Gautama Dharmasūtra* (about 700 B.C.).¹⁹ There can be no doubt therefore as to Veda Vyāsa having been living at a time prior to Uddālaka and Yājñavalkya, who are the principal teachers of the identity of the Ātman and Brahman which is established in the *Chāndogya* and *Bṛhadāraṇyaka Upaniṣads*.

On the other hand Bādarāyaṇa has in his *Brāhmasūtra* tried to establish the Vedānta or Uttara Mimāṃsā system of thought on bringing about a reconciliation of the apparently divergent statements contained in the texts of not only the said *Upaniṣads* but also of other later ones such as the *Muṇḍaka*, *Jābāla*, *Praśna* and *Śvetāśvatara Upaniṣads*, which show an influence of the Sāṅkhya doctrine of freedom through complete renunciation and inactions. All these *Upaniṣads* must already have been in existence prior to the time of Gautama Buddha and of Pāṇini.²⁰ Not only that but even the theories of the Śūnyavādins and Kṣāṇikavijñānavādins established in their Sanskrit works only, were known to and refuted by Bādarāyaṇa.²¹ These Vedas had come into

¹⁶ *Op. Cit.* VI 2. 4-16.

¹⁷ Pargiter, *A.I.H.T.* pp. 330-31.

¹⁸ *Chā. Upa.* V. 11-17.

¹⁹ *S. B. E.* Vol. II Intro. to *Āpastamba* pp. XXII, XXXIV to XLIII, Intro. to *Gautama* pp. XLIX to LVII.

²⁰ Winternitz, *Op. Cit.* p. 236, 392, 393, 310.

²¹ *Br. Sū.* II. 2-18-22 . . . and Śaṅkara's *Bhāṣya* thereon.

existence considerably later than the division of the Buddhists into the followers of the Mahāyāna and Hināyāna schools and that division had again taken place after several previous schools such as those of the Theravādins and the Mahāsaṃghikās had arisen and been extinguished.²² The author of the *Brahmasūtra* must therefore have lived considerably later than not only the age in which the said Upaniṣads were compiled but also that in which the later Buddhist Vādas established in Sanskrit works had originated.

Further the fact that Bādarāyaṇa refers at several places in his *Sūtra* to the views of one Jaimini on diverse topics²³ is an eloquent proof of his being either of a later date than or of the same date as Jaimini. Most probably the latter was the case because his views there referred to are such as presuppose a knowledge on his part of almost all the texts of the Brāhmaṇas and Upaniṣads known to Bādarāyaṇa. That being so and the earliest sage of that name known to Sanskrit literature being only the pupil of Veda Vyāsa whom he had taught the *Sāmaveda*,²⁴ this Jaimini must have lived in an age considerably later than that in which Veda Vyāsa could have lived and consequently Bādarāyaṇa must not only be distinct from the latter but must also have lived in a very later age than him.

IV. Date of the Work.

Veda Vyāsa, the compiler of the *Vedic Samhitās* and the author of *Bhārata Epic* in its original form being thus clearly distinguishable from Bādarāyaṇa Vyāsa, the author of the *Brahmasūtra*, and there being no other Vyāsa, during the period intervening between them, the date of the *Bhagavadgītā* must necessarily be the same as that of the

²² Divanji, *Introduction to the Siddhāntabindu* (G. O. Series No. 64) pp. 22-25.

²³ *Br. Sū.* I. 2.28, 31; 3.31; 4.18; III. 2.40; 4.2, 18. 40; IV. 3.12; 4.45.

²⁴ Pargiter, *A.I.H.T.* pp. 321-25.

former sage and that of the said compilations and Epic. The date of the Epic again must necessarily be very near that of the Bhārata War itself because Veda Vyāsa was the father by Niyogavidhi of Pāṇḍu, Dhṛtarāṣṭra and Vidura and one of the elders who consoled Yudhiṣṭhira when he felt dejected after he was installed on the throne of Hastinā-pura on the termination of the war.

Various attempts have been made to fix the date of the said war. Mr. Vaidya concluded that it must be 3102 B.C.²⁵ That must be the date also according to the Yudhiṣṭhira Era which is still current in some parts of India as in Kāśmīr. This is however based on astronomical grounds only which are not free from errors. According to literary traditional evidence recorded in the Paurāṇic works Pargiter has come to the conclusion that it must be about 950 B.C.²⁶ This is however due to his having allowed 18 to 20 years to each monarch intervening between Parikṣita II, the successor of Yudhiṣṭhira and Mahāpadma Nanda. Sitanath Pradhan having considered the same question from several viewpoints including the lists of Vedic teachers has arrived at the conclusion that the Bhārata war must have occurred in about 1150 B.C.²⁷ If the period for each reign of the 26 kings of Magadha from Senajit, a contemporary of Adhisimakṣṇa is taken to be 25 years, which in my view is the only proper period, and the total period of 650 years thus arrived at, is added to the 382 years prior to the Christian Era when Mahāpadma can be believed to have ascended the throne there, the total comes to 1032 B.C. And if to this 100 more

²⁵ M. Winternitz, *H.I.L.*, Vol. I. 473.

²⁶ Pargiter *A.I.I.T.* pp. 179-83. H. C. Raychaudhari (*Political History of India*, 4th edition, pp. 27-28) relying on the Vamśa lists in the *Sāṅkhāyana Āraṇyaka* and *Sāṅkhāyana Gṛhyasūtra* has fixed 850 B.C. as the date of the said war.

²⁷ *Chronology of Ancient India* (Cal. 1927) pp. 169-75, 268-69. See also Trivedi, "The Intervening Age between Parikṣita and Nanda (*Journal of Indian History*, Vol. XIX. pt. I. pp. 1-16).

years are added on account of the four predecessors of Adhisīma up to Parīkṣita II, the date of his accession comes to 1132 B.C. Adding 36 years of the reign of Yudhiṣṭhira himself we arrive at 1168 B.C. as the approximate date of the Bhārata War. This is very near the date arrived at, by Sitānath Pradhan and roughly accords with the interpretation of the chronological data as given in the Purāṇas so as to point to an interval of 1050 years between Adhisīma and Mahāpadma. As against this if the other interpretation the Paurāṇic text is adopted, as seems to have been done by some other scholars, the date is pushed back by 450 years, the relevant words being construed as meaning 1500 instead of 1050, *i.e.*, it comes to 1132 plus 450 = 1582. Dr. Altekar of Benares has, while accepting the former interpretation, pushed back the date by 232 years, *i.e.*, he has arrived at 1400 B.C. as the approximate date of the war, for reasons which are not clear.²⁸ The highest limit for the date of the Bhārata War thus comes to be 1582 B.C. and the lowest 1132 B.C. The collection of the epic ballads into the *Bhārata Samhitā* can therefore be reasonably deemed to have been made in about 1575 or 1125 B.C. and that would also be the approximate date of the *Bhagavadgītā* which formed part of that *Samhitā*.

The latter of the two limits is in my opinion, quite consistent with the work being of the authorship of Veda Vyāsa, the post-Vedic sage who collected together the Vedic hymns and formulas and having made out 4 *Samhitās* thereof taught them to four of his pupils, to each of whom a separate function was also given at a sacrifice. Many of the Brāhmaṇas in which elaborate sacrifices have been described or referred to, the Upaniṣads in which the doctrines of the identity of Brahman and Ātman have been propounded and the ways for its realisation has been

²⁸ Presidential Address, Indian Historical Congress, Arch. Section, Calcutta, 1939.

described or referred to and all the Śrauta, Gṛhya and Dharma Sūtras, the Prātiśākyas and the Anukramaṇis including the Bṛhaddevatā constitute according to this conclusion the post-Saṁhitā literature. So do the Sūtra Works on the other Vedāṅgas, Chandas, Jyotiṣ, Vyākaraṇa, etc. and the Darśanas, orthodox and heterodox. Bādarāyaṇa Vyāsa was one of the authors of one of the Darśanaśāstras. A detailed critical examination of the prosody, style, diction, grammar and imagery of the *Bhagavadgītā*, its comparison with Upaniṣads and Kauṭilya's *Arthaśāstra* from the linguistic view-point and the contents of the *Aṣṭādhyāyī* of Pāṇini and of the previous literature not referred to and hinted at therein, the history of the Smṛti literature, of which the *Bhārata Epic* including the *Bhagavadgītā* forms a portion, of the Sāṅkhya and Yoga doctrines in their original forms, which is what is meant by the term "Epic Philosophy," of the main and subsidiary philosophical doctrines expounded therein, of the probable sources drawn upon by the author for his exposition, of the Vedic and Paurāṇic gods and goddesses referred and not referred to therein, of the modes of worship or ways of propitiation of the deity mentioned therein, of the names of the older sages and kings referred to therein and of the highest ideal held forth therein for being realised by the said modes or ways, is absolutely necessary with a view to show that there is nothing at all in the work which is inconsistent with its being a Smṛti work of a date falling between the 15th and the 12th centuries B.C., in which period several other Smṛti works had been composed as can be seen from the references thereto in the works of the later period which are now available. It is however impossible to do so within the limited space allotted to this article. I, therefore, leave that to be done on some other occasion.

THE CO-ORDINATION OF BHĀRATA EVENTS,
FROM THE EXILE OF THE PĀNDAWAS,
TO THE DEATH OF BHĪṢMA, BY
DETERMINING THE TITHI OF
EACH IMPORTANT EVENT

By V. B. ATHAVALLE

LET me begin with a note on the nomenclature of the 'Tithi' and the month. A 'Tithi' is a relation between the position of the sun and the moon. The पौर्णिमा is clearly the 'Tithi' when the full disc of the moon is shining. The 'अमावास्या' is the 'Tithi' when the sun and the moon remain together. The name for the lunar month is given by observing the star cluster (Nakṣatra) with which the moon coincides on the full moon day. But whether the month should end with 'अमावास्या' or 'पौर्णिमा' depends on the choice of the people. South of the Narmada river the month is 'अमांत' while on the north of the river the nomenclature is 'पौर्णिमांत.' In the 'अमांत' month the bright half of the month comes first and it ends with the dark half. On the other hand in the 'पौर्णिमांत' method the dark half¹ of the month comes first and it ends with the bright half of the month.

At the time of the Kuru war the month nomenclature was 'पौर्णिमांत' and the same method is current still in the Northern India. For, in Aśwamedha, 85. 4. 8. (निवृत्तं वारणं भुत्वा चारेणैव युधिष्ठिरः। इष्टं गृहीत्वा नक्षत्रं (पुनर्वसु) द्वावर्षौ माघमासिकीं प्रोवाचेवं वचः काले भीमं प्रहरतां वरम्॥ माघी च पौर्णिमासीत्यं मासः शेषः वृकोदर। Yudhisṭhira clearly says that the month of 'Māgha' is coming at its end on the full moon day and it means that the month of 'Phālguna' is to begin with a dark half.² The 'Amāwāsyā' following the 'Māgh Pournimā' will be 'Phālguna Amāwāsyā' and not 'Māgha Amāwāsyā.'

¹ *Mbb.* III. 162.11, "तामिहं प्रथमं पक्षं वीतरोकमयः वस ।" confirms the conclusion.

² *Ibid.*

As an illustration we shall take the day of the attack by 'Trigarta' on the cowherds of 'Virāṭa.' We know from Virāṭa 47. 22, that it was 'प्रीष्म ऋतु' when the attack was going on अदेशिका महारण्ये प्रीष्मे शत्रुबलं गताः। Virāṭa, 47. 10, 11 tell that Duryodhana had promised 'Trigarta' that he should start the attack on the 7th, and the Kaurava army should attack by the northern side on the next day. Virāṭa, 30. 27, tells that it was the 7th day of the dark half (कृष्ण सप्तमी). Now 'Jyēṣṭha' and 'Āṣāḍha' represent the 'प्रीष्म ऋतु'. Thus the month must be either of the two. But 'Jyēṣṭha Vadya' means 'Vaiśākha Vadya' of 'अमांत,' month-nomenclature and the 'Jyēṣṭha Śuddha' of both these methods coincide, because in the 'पौर्णिमांत' month the 'Vadya pakṣa' precedes the 'Śukla pakṣa' while in the 'अमांत' it is the reverse.

The next question is as to how to decide about the month of the attack. We shall now prove that it was the month of 'Vaiśākha Vadya' according to the 'अमांत' nomenclature or 'Jyēṣṭha Vadya' by the 'पौर्णिमांत' no nomenclature and not 'Āṣāḍha.'

The marriage of Abhimanyu must have taken place at least a fortnight after the campaign was won by Arjuna. For Kṛṣṇa Abhimanyu and others were at Dwārakā and they were to come to Upaplavya for the ceremony. In Strī, 20. 28, Uttarā the daughter of Virāṭa while weeping over the death of Abhimanyu says 'एतावान् इह संवासो बिहितः ते मया सह। वण्मासान् सप्तमे मासि वीरत्वं निघनं गतः। But we know that Abhimanyu died on the 13th day of the battle. As the battle had started in the bright half of Mārgaśīrṣa, and the ladies had come to Kurukṣetra on the 19th day, it must be the beginning of 'पौष' If we count from 'Jyēṣṭha' then only the statement of Uttarā can be justified. Further we know that 'Parikṣit' was born in the month of 'Phālguna.' Nine months are completed, only if, we count from Jyēṣṭha.

I have thus proved that the 'Tithi' on which Arjuna got success against the Kaurawas was 'Vaiśākha Vadya 8th.' i.e., the 8th day of the dark half of 'Vaiśākha.' This date is very significant, because it was on this day that Arjuna drove his chariot first to the Śamī tree, where they had deposited their war weapons (V. 5. 16.) and took down bow, conch and monkey painted banner. He removed the Lion painted banner of Virāṭa and planted his own there (V. 46.13.) When he returned after his victory, he came back to the Śamī tree and kept his weapons and banner in the tree and replaced the lion banner of Virāṭa which was removed. (V. 63. 13.).

When Arjuna sounded the conch, that tone was at once recognized by Droṇa and he said that it must be Arjuna and none else, and he expressed the fear that he was not sure of the success now. Duryodhana on the other hand got delighted with the news. He said "The last year is not yet over. If Arjuna is recognized before this period is over the Pāṇḍawas will have to go to the forest again for 12 years according to the accepted conditions. (V. 47. 3-7).

We have already seen above that Arjuna had used his bow only privately. He did not wish to disclose that 'Bṛhannalā' and 'Arjuna' were identical personalities. Arjuna had instructed the prince Uttara not to disclose his identity to his father. V. 69. 12. 14, बिराटः—एव स बीरो महाबाहुः देवपुत्रो महायुताः। यो मे धनं अयाच्यीत् कुबभिः प्रसन्नं आहवे। उत्तरः—स तु इवो वा परइवो वा मन्ये प्रादुर्भविष्यति। tells that Arjuna wished to disclose his identity two or three days afterwards. V. 79.1.3-5, ततः तृतीये दिवसे भ्रातरः पंच पांडवाः। बिराटस्य सभां गत्वा समये चारितव्रताः। निवेदुः पावक-प्रव्याः भूमिपःलासनेष्वच। tells that three days later the Pāṇḍawas went to the court and 'Kaṅka,' the dice player, occupied the throne of Virāṭa. When Virāṭa arrived in the court, he got enraged to see his servant occupying the throne. Uttara intervened and disclosed that he (Kaṅka) was Yudhiṣṭhira, and he really deserved

the throne and they were his vassals. The brothers disclosed themselves on that day because their vow of remaining unrecognized was over. A week must have elapsed after वैशाख वद्य ८ Hence, it is clear that 'Jyēṣṭha Śukla 1st was the day on which the period of the vow expired according to the counting of the Pāṇḍavas. This leads us to determine the exact 'Tithi' on which the five brothers were required to leave Indraprastha, being defeated in the dice play, and also the day on which Kīcaka was killed.

Virāṭa 14. 1. 3 ('पांडवेषु च छत्रेषु मासा द्वा समापयुः। सेनापतिः विराटस्य द्रुपदो द्रौपदीं तदा') tells that Kīcaka saw Draupadī, after ten months stay in the palace. When Bhīma killed Kīcaka and his brothers, without disclosing his identity he released Draupadī from the pyre to which she was tied.

When Virāṭa heard that Draupadī was released by some powerful unknown person, he thought that it was good to dismiss her from her post as an attendant to the queen. When Draupadī returned to the palace, Uttarā, the daughter of Virāṭa told her that she was dismissed from the service. Then Draupadī requested Sudeṣṇā, the queen, to allow her to stay for 13 days more, when her Gandharva husbands would surely come to take her with them. (Virāṭa 24. 29. त्रयोदशाहमात्रं मे राजा आम्यतु भामिनी। ततो मां उपनेष्यंति गंधर्वाः ते न संशयः।

We have already seen that the Pāṇḍawas disclosed their identity on ज्येष्ठ शुक्ल प्रतिपदा. Therefore, counting 13 days back, we get the 'Tithi' on which Kīcaka was killed, which is 'Vaiśākha वद्य'³. The Pāṇḍawas must have entered the kingdom of Virāṭa by the end of Vaiśākha of the previous year to remain unnoticed. This is corroborated by another statement in the Vir. 13. 14, (अथमासे चतुर्थे तु ब्रह्मणः सुमहोत्सवः। आसीद् समृद्धो मत्स्येषु पुरुषाणां सुसंमतः।). The Brahma

³ That the night was a dark one is corroborated by विराट 22. 37, 40 and 92. 'तमस्विभ्यां...' or 'सहस्रैव समाजग्मुः आवायोल्काः सहजयाः।' The torches were used because the night was dark.

festival took place in the fourth month. Now, 'Bhādrapada' is the 4th month after the entry of the Pāṇḍawas in the Virāṭa kingdom. In 'Bhādrapada,' the Gaṇapati festival is observed. (गणानां त्वा गणपतिः... ज्येष्ठराजं ब्रह्मणां). The present Gaṇapati festival was called ब्रह्मोत्सव in the past.

Thus 13 years previously, to the 'Vaiśākha Vadya 13th,' the Pāṇḍawas went in exile. But we know that on 'Vaiśākha Vadya 8th,' Duryodhana was under the impression that the conditional period was not over. He says लोभात् वा ते न विजानीयुः अस्मान् वा मोहमाविशत्। हीनातिरिक्तं एतेषां भीष्मो वक्तुं अर्हति। अर्षानां च पुनः द्वेषे नित्यं भवति संशयः।

"Either they do not care to remember the conditions or we have confused over them. Bhīṣma is the proper authority to decide whether the period is yet to be over or it has been already completed. The interpretation of the condition may differ."

Droṇa too had appealed to Bhīṣma to give the right decision. In Virāṭa 51.21-22, (वनवासो हि अनिर्बुत्ते वर्शयेत् न धनंजयः। धनं अलभमानः सप्त नाद्य तत् क्षंतुं अर्हति। उक्तं दुर्योधनेनापि पुरस्तात् वाक्यमीदृशं। तदनुस्मृत्य गांगेयः यथावत् वक्तुं अर्हति।) he said "Arjuna will not show himself before the period is over. Yet if he discloses himself before the period is over he does not deserve mercy. So let Bhīṣma give the decision."

To this appeal, from both Duryodhana and Droṇa, Bhīṣma gives his answer पंचमे पंचमे वर्षे द्वौ मासौ उपजायतः। एषां अभ्यधिका मासा पंच च द्वादशक्षयाः। त्रयोदशानां वर्षाणां वर्तते इति मे मतिः। सर्वे यथावत् चरितं यत् यत् एभिः प्रतिश्रुतम्। "Every five years two month are added, and in their 13 years condition they will get a remission of five months and twelve nights. Thus in my opinion the Pāṇḍawas have fulfilled their promise."

If we add five months to 'Vaiśākha Vadya 13th,' we get 'Āśvina Vadya 13th.' This means that the Pāṇḍawas were defeated in the dice play on this day, thirteen years back. Curiously enough this is exactly the 'Tithi' which is called the 'Yakṣa-rātri,' and on this night people invariably

play 'सूत'. Those who are interested in the history of this सूत should read the article by Mr. P. K. Gode, in the February 1946 issue of the Allahabad *Ganganatha Jha Research Institute Journal*.

We can now understand why Arjuna had asked the Prince not to disclose his identity for a few days more, and why Draupadī had asked Sudeṣṇā to allow her to stay in the palace for 13 days more. Yudhiṣṭhira was counting the days and he knew that their promise would be over on 'Vaiśākha Vadya 13th,' when he could legitimately disclose his identity.

Duryodhana on the other hand did not know much about the additional months and he was expecting that there were yet five months more, and the condition would be complete on 'Āświna Vadya 13th.' We have seen already, how Duryodhana was jubilant when Droṇa recognized the sound of the conch of Arjuna, but all his hopes were smashed by the decision of Bhīṣma on that point.

About the hopes of Duryodhana we find another illustration in the Virāṭaparva as follows :—(V: 39. 13)

तं दृष्ट्वा क्लीबवेष्टेन रथस्थं नरपुंगवं ।

गुहः शस्त्रभृतां खेळः मारद्वाजोभ्यभाषत ॥

आगतो क्लीबवेष्टेन पार्थो नास्त्यत्र संशयः ।

नेहास्य प्रतियोत्तारं अहं पश्यामि कौरवाः ॥

कर्णः—'सदा भवान् फाल्गुनस्य गुणैः अस्मान् विकल्पते ।

न च अर्जुनः कलापूर्णः मम दुर्योधनस्य च ॥

दुर्योधनः—'यद्येव पार्थो राधेय कृतं कार्यं भवेत् मम ।

ज्ञाताः पुनः चरिष्यन्ति द्वादशाब्धान् विज्ञापते ॥

कर्णः—'यदि एव राजा मत्स्यानां यदि बीभत्सुः आगतः ।

चारयिष्याम्यहं एकः बेलेव मकरालय ।

This quotation shows clearly that Duryodhana had planned the attack with the hope that the Pāṇḍawas may be recognized, because the death of Kīcaka had suggested that it was probably the work of the Pāṇḍawas.

In this campaign Arjuna had defeated single handed, six Mahārathis and it was in this battle that the brother of Karṇa was killed, by Arjuna and also the bragging Karṇa was routed. Duryodhana was forced to retreat, leaving the cow-herds of Virāṭa free. This attack was started early in the morning of 'Vaiśākha Vadya 8th,' and Arjuna returned to the town of Virāṭa, after achieving victory, in the afternoon. (V. 67 .19 अपराह्णे हि यास्यामो विराटं नगरं प्रति।)

Virāṭa 72, 14, ततः त्रयोदशे वर्षे निवृत्ते पंच पांडवाः। उपप्लव्यं विराटस्य समपद्यंत सर्वशः। tells that the Pāṇḍawas shifted to Upaplawya, after they had completed the condition of 13 years of exile. We have already seen that the date of the expiry of this period was 'Vaiśākha Vadya 13-14th.' Thus it is clear that they must have shifted from the Virāṭa town to Upaplawya, in the beginning of 'Jyeṣṭha Śukla.' But I have already shown that the nomenclature of the month coincides in the bright half of any month, whether it be अमांत or पौर्णिमांत, method of calculation. The 'Tithi' of the expiry of the condition, being in the dark half, the nomenclature of the month varies. For the sake of clarity let me repeat the statement, about the day, on which the exile condition was laid down, and then again the date of the expiry. The dice play (दूत) started on 'Āświna Vadya 14th,' यक्षरात्रि according to the 'अमांत' nomenclature. By the पौर्णिमांत method यक्षरात्रि would be 'Kārtika Vadya 14th.' The Pāṇḍawas actually started for the exile, a day or two later, i.e., on 'Kārtika Śukla 1st, or 2nd.' As it is the bright half of 'Kārtika' the nomenclature of the month coincides according to both the methods.

The date of the expiry of the condition was 'Vaiśākha Vadya 13th' by the 'अमांत' method, but by the 'पौर्णिमांत' method it was 'Jyeṣṭha Vadya 13th.' But as the Pāṇḍawas shifted to Upaplawya in the bright half of 'Jyeṣṭha' the nomenclature of the month again coincides.

Now let us try to determine the 'Tithi' on which the first emissary was sent by the Pāṇḍawas to Hastināpura. For, Udyoga, 6. 17, स भवान् पुष्ययोगेन प्रायातु मातुः कौरवान् tells that the emissary left when the 'Nakṣatra' was 'Puṣya'. The marriage of Abhimanyu must have taken place in the bright half of the month of 'Jyeṣṭha.' We know that the moon is in 'Jyeṣṭha nakṣatra' on the full moon day of that month. 'Puṣya' is the 17th 'Nakṣatra' from 'Jyēṣṭha.' Therefore the emissary must have left on 'Āṣāḍha Śukla 2nd' at the earliest, or 27 days later, on 'Āṣāḍha Vadya 14th,' when the 'Nakṣatra' appears again. 'Āṣāḍha Vadya 14th' can be easily discarded, because the 'Tithi' is in the dark half and more so as they approached 'Amāwāsya,' they are never classified as auspicious for departures. Thus 'Āṣāḍha Śukla 2nd' must be the 'Tithi' on which the emissary left.

Now let us consider some incidents which preceded the departure of the emissary, because they throw a good deal of light on the question, about the differences of opinion that arose, when Bhīṣma gave his opinion that the Pāṇḍawas had completed their promise on 'Vaiśākha Vadya 8th,' and they had no more any moral obligations on that score. Duryodhana and Karṇa were of the opinion that the Pāṇḍawas failed to fulfil the promise, because the period expired on 'Āświna Vadya 14th' and not on 'Vaiśākha Vadya 8th.' The grace of five months was a partiality shown by Bhīṣma to the Pāṇḍawas. As Bhīṣma was considered as the final authority, on such questions, Karṇa and Duryodhana could not openly challenge him. But whenever occasions arose, both Karṇa and Duryodhana expressed their dissatisfaction about the decision.

Udyoga, 1.1, कृत्वा विवाहं तु कुटुम्बीराः विधम्य पत्न्याः उवसि प्रतीतः सभां विराटस्य ततोऽभिजन्तुः। tells that the meeting took place in the palace of Virāṭa, after the ceremony of the marriage of Abhimanyu was over, at Upa-

plawya. Drupada, Balarāma, Sātyakī, Kṛṣṇa, Sāmba, Pradyumna and others were present. It was Kṛṣṇa who addressed the meeting first. 'युधिष्ठिरः सौमित्रेण अश्वत्थामा जितः निकृत्वा अपहृतं च राज्यं। इक्ष्वा विजेतुं तरसा महीं अपि सत्ये स्थितः सत्यरथैः यथावत्॥ पांडोः सुतैः तत् व्रतं उपरुप्य क्लेशान् असह्यान् विविधैः सहृद्भिः। सर्वं त्रयोविंशं तु वने निबिडं' "The Kingdom of 'Indraprastha' was inherited by the Pāṇḍawas and they had even expanded it by their own valour. Duryodhana snatched away this inherited kingdom, not by defeating the Pāṇḍawas in a war, but by the crooked way of the defeat in the dice play. The Pāṇḍawas suffered innumerable hardships, just because they meant to remain true to their words, and they have now completed their stipulated period. Yudhiṣṭhira must now get back the kingdom which he can claim now as a right. We do not know, what step Duryodhana wishes to take now. It is better to send an emissary to negotiate and try to get back the legal share, as a demand and not as favour."

Balarāma was however, of a different opinion. In Udyoga, 2. 8, (प्रियाभ्युपेतस्य युधिष्ठिरस्य द्यूते प्रसक्तस्य हृतं च राज्यं।) Balarāma says 'it was the fault of Yudhiṣṭhira' to play the game of dice with Śakuni, who was well known to be an expert in the game. Yudhiṣṭhira wanted a victory over Śakuni, which was impossible for a novice like him. It was no fault of Śakuni to conquer Yudhiṣṭhira, when the play took place. Thus the kingdom cannot be asked for as a demand, but Duryodhana should be requested to give back the kingdom."

Balarāma further maintained that Duryodhana was already a king and he was behaving according to the Śāstras (Udyoga 2, 6, 7), so care should be taken that he does not get angry, by the demand, and the request should be made with all humility.

दुर्योधनः तु निगमप्रधानः स्थितः च धर्मेषु तथास्वकेषु।

सर्वासु अवस्थानु च स न कोप्यः।

Sātyakī got angry. He was pained to see the contrast between the attitude of Kṛṣṇa and Balarāma and their behaviour towards the Pāṇḍawas.

एकस्मिन्नेव जायेते कुले क्लीब महाबली ।
 नाभ्यसूयामि ते वाक्यं ब्रुवतो लांगलघ्वज ।
 ये शृण्वन्ते तु ते वाक्यं तान् अभ्यसूयामि माधव ।
 कथं हि धर्मराजस्य दोषं अल्पं अपि ब्रुवन् ॥
 लभते परिवत् मध्ये व्याहर्तुं अकुतो भयः ।
 यदि कुंती सुतं गेहे क्रीडन्तं भ्रातृभिः सह ।
 अभिगम्य जयेयुः ते तत् तेषां धर्मतो भवेत् ।
 समाहूय तु राजानं क्षत्रधर्मरतं सदा ॥
 निकृत्या जितवन्तः ते किं नु तेषां परं शुभम् ।
 कथं प्रणिपतेत् चायं इह कृत्वा परंपण ॥
 वनवासात् विमुक्तः तु प्राप्तं पैतामहं पदम् ।
 नाशमो विद्यते कश्चित् शत्रून् हत्वा ततायिनः ॥
 अधर्म्यं अयशस्यं च शात्रवाणां प्रयाचनम् ॥

This long quotation is given here intentionally to show how vehemently Sātyakī opposed the suggestion of Balarāma to entreat Duryodhana in a humiliating manner. On the other hand he maintains that it is the 'Dharma' of the Kṣatriyas to kill kings like Duryodhana who are desperadoes.

"In 'Vana-Parva' we get a similar statement by Kṛṣṇa. He says निकृत्य उपचरन् वध्यः एव धर्मः सनातनः । "with the rogues you should not deal in a straight-forward manner, but they should be paid in the same coin."

The king Drupada also opposed the suggestion by Balarāma. He said

"नहि दुर्योधनो राज्यं मधुरेण प्रदास्यति ।
 बलदेवस्य वाक्यं तु मम ज्ञाने च युज्यते ।
 गर्वमे मादवं कुर्यात् गोषु तीक्ष्णं समाचरेत् ।
 मृतु दुर्योधने वाक्यं यो ब्रूयात् पापचेतसे ।
 मृतुं च मन्यते पापो भावमाणं अज्ञातितकं ।
 जितं अर्थं विजानीयात् अबुधो मादवे सति ।
 प्रेष्यतां चतुराष्ट्राय मम राजन् पुरोहितः ।
 यथा दुर्योधनो बाण्यो वाक्यं अस्मै प्रदीयताम् ॥

In this way the chief priest of Drupada left for negotiations. I think that the 'Tithi' of his departure must be 'Āṣāḍha Śukla 2nd.' Kṛṣṇa and Balarāma also went to Dwāraka.

When Duryodhana learnt from his men that Kṛṣṇa has left for Dwārakā, he himself went to Dwārakā to get help from vṛṣṇi family, in the war. He knew that Kṛṣṇa would not be on his side and yet he approached Kṛṣṇa.

ततो दुर्योधनः कृष्णं उवाच प्रहसन्निव ।
 विप्रहेऽस्मिन् भवान् साह्यं मम दातुं इहार्हंति ।
 सर्वं हि भवतः सख्यं मम वैवर्ज्येनैव च ।
 तथा संबंधकं तुल्यं अस्माकं त्वयि माधव ॥

He argued with Kṛṣṇa that Arjuna was related to him in the same way as he (Duryodhana) was related with to Kṛṣṇa. Thus he also deserved help from the 'vṛṣṇi' family. He said all this in a tone of ridicule which suggested that Kṛṣṇa was partial in identifying himself with the Pāṇḍawas.

Duryodhana also went to Balarāma and requested him to join his side in the case of war. Balarāma said,

“मयोक्तं हि विराटस्य पुरा वैवाहिके तवा ।
 निगूह्योक्तो हृषीकेशः त्वयार्यं मधुसूदनः ।
 मया संबंधकं तुल्यं इति राजन् पुनः पुनः ।
 न च तत् वाक्यं उक्तं वै केशवं प्रत्यपद्यत ।
 नार्हं सहाय्यः पार्यस्य नापि दुर्योधनस्य वै ।
 इति मे निश्चिता बुद्धिः वासुदेवं अवेष्य ह ।
 गच्छ धर्मेण युज्यस्व क्षात्रेण पुरुषर्षभ ॥

Udyoga 20, tells what the chief priest told 'Dhṛtarāṣṭra,' 'Bhīṣma' and others. He said "Pāṇḍu and Dhṛtarāṣṭra were brothers and had the same father. They ought to inherit equally the property of their father. The sons of Pāṇḍu must get the share of their father, but Dhṛtarāṣṭra is unjustly withholding their share. By the foul means of the dice play their share was snatched away and they were driven to the woods for 13 years. Without grumbling that condition is also fulfilled. Now their due share should be

returned. 'The Pāṇḍawas do not wish to wage war to get their share. If Duryodhana is not ready to give the share without a war, they are prepared to wage a war also.

ते भवन्तो यथाधर्मं यथासमर्थं एव च ।

प्रयच्छन्तु प्रदातव्यं मा वः कालः अत्यगात् अयं ॥

Udyoga 21, tells that Bhīṣma said that the demands of the Pāṇḍawas were just, but the words in which they were given were rather strong.

अति तीक्ष्णं तु ते वाक्यं ब्राह्मण्यात् इति मे मतिः ।

When Arjuna was in the battle field it was very hard to fight against him. When Karna heard this speech of Bhīṣma, he took an objection to what Bhīṣma maintained. He said to the priest "You Brāhmaṇa, what is the use of repeating the same useless arguments, over and over again. Śakuni had defeated Yudhiṣṭhira in the dice play. The Pāṇḍawas were recognized before their period of vow was over. Thus they have no moral basis to demand the kingdom back. If Yudhiṣṭhira wants his kingdom back he ought to go to the forest for 12 years more and then Duryodhana will give them, not only the half, but the whole of the kingdom.

धर्मतः तु महीं कृत्स्नां प्रदद्यात् शत्रवे अपि च ।

'The Pāṇḍawas do not wish to be religious and they are now demanding the kingdom under the threat of arms. It is foolish to expect that Duryodhana will yield to such threats. Tell the Pāṇḍawas that Karna alone can rout the Virāṭas and the Pāṇḍawas put together."

Bhīṣma got angry when he heard Karna, indirectly challenging his decision that the moral responsibility of the Pāṇḍawas was over, and that they could claim back their share. Bhīṣma said, "Karna, why are you bragging like a fool. Do'nt you remember that you were bragging like that while the cowherd campaign was going on, and you were yet—easily routed by Arjuna."

Then Dhṛtarāṣṭra intervened and said that he was sending Sañjaya to the Pāṇḍawas. It is interesting to note that

Safijaya appears here first in the Bhārata story. Before the Udyoga Parva, the name of Safijaya does not appear at all. Safijaya is a predominant figure upto the 'Strī-parva,' which means the end of the war. In the 'Parvas' 12 to 18 we do not find Safijaya again. This shows that Safijaya was a war correspondent. I have established this fact independently, in the Feb. 1946 issue of the *Allababad Ganganatha Jha Research Institute Journal*.

Udyoga 23. 1, tells that Safijaya went to, Upaplavya. Udyoga 32. 1, tells that Safijaya returned with a word from Yudhiṣṭhira. Udyoga 47, 77 gives a description of the delivery of the message by Safijaya in the court of Duryodhana. After hearing the message Bhīṣma said to Duryodhana, (त्रयाणां एव च मतं त्वमेको अनुमन्यसे। बुर्जातः सूतपुत्रस्य शकुनेः सौबलस्य च ॥ तथा क्षत्रस्य पापस्य भ्रातुः दुःशासनस्य च।) "You are always prone to listen to the advice of the lowborn Karṇa, the crooked Śakunī and your wicked brother Duśśāsana." Karṇa got angry when he heard the remark of (बुर्जातः) from Bhīṣma. He said, "आत्रघर्मे स्थितो ह्यस्मि स्वधर्मात् अनपेयिवान्। किं चान्यत् मयि बुर्जं येन मां परिगृह्णसे ॥ नाचरं वृजिनं किञ्चित् धार्तराष्ट्रस्य नित्यशः। अहं हि पांडवान् सर्वान् हनिष्यामि रणे स्थितान् ॥ प्राक् विरुद्धेः शर्मं सविभः कथं वा क्रियते पुनः। राज्ञो हि धृतराष्ट्रस्य सर्वं कार्यं प्रियं मया ॥ तथा दुर्योधनस्यापि स हि राज्ये समाहितः ॥

Bhīṣma told Duryodhana that Karṇa always brags simply, that he would defeat all the Pāṇḍawas single-handed. In the fight with Virāṭa however, Arjuna had easily defeated Karṇa, although Arjuna was then single-handed.

Udyoga 72, tells "when Safijaya returned to Hastināpur, Yudhiṣṭhira got restive and requested Kṛṣṇa to instruct him about the manner in which he should proceed so as to avoid war." He says

"यद्बलं कौरवान् हत्वा तानि राष्ट्राणि आप्नुमः।

ये पुनः स्युः असंबद्धाः अनायाः कृष्णशत्रवः।

तेषां अपि अबलः कार्यः किं पुनः ये स्युः ईदृशाः।

शातयः चैव भूमिष्ठा सहायाः गुरवः च नः।

पापः क्षत्रियवर्गोऽयं वयं च क्षत्रबाधकाः ।

वयं वधेन जीवामः कपालं ब्राह्मणेः द्युतम् ॥

“The role of a ‘Kṣatriya’ in society is the most sinful one, because he lives by killing others. The begging bowl also cannot be restored to because it is already handed over to the Brāhmaṇas.”

Kṛṣṇa says

सर्वं जानामि अभिप्रायं तेषां च भवतः च यः ।

तव धर्माश्रिता बुद्धिः तेषां वैराग्या मतिः ।

यत् अयुधेन लभ्येत तत् ते बहुमतं भवेत् ।

जयो वधो वा संग्रामे क्षात्रा आदिष्टः सनातनः ।

स्ववर्गो क्षत्रियस्येवः कार्यण्यं न प्रशस्यते ॥

नहि कार्यण्यं आस्थाय शक्या वृत्तिः युधिष्ठिर ।

आहुः आश्रमिणः सर्वे न भैक्ष्यं क्षत्रियः चरेत् ।

It is interesting to note the word ‘कृपण’ in this answer. To beg favours from others is ‘कृपणत्व’, for a Kṣatriya. *Gītā* uses the same word. Kṛṣṇa finally accepted to go for negotiations with the express condition that he would not beg for five towns, but put it forth as the minimum demand, to avoid war.

On what ‘Tithi’ Kṛṣṇa started, we shall try to determine it, in the next part.

The problem about the exact day (तिथि) rather the ‘जलज’ on which the Kuru war started is still undecided. The ‘Tithi’ on which Bhīṣma passed away is also not ascertained. The months in which both these incidents occurred are definitely known and there are no differences of opinion on that point. The month of the Kuru war was ‘मार्गशीर्ष’. The month in which Bhīṣma passed away was ‘माघ’. The third problem about the number of days for which Bhīṣma was on the arrow-bed is also unsolved. Because unless the date of the Kuru war is fixed and the date of passing away of Bhīṣma is determined, it is not possible to count the days for which Bhīṣma was on the arrow-bed.

The Tithi of the Kuru war is given by *Bhārata-Sāvitṛī*. It is हेमन्ते प्रथमे मासे शुक्लपक्षे त्रयोदशी । प्रवृत्तं भारतं युद्धं नक्षत्रे यमदेवते (मृग). Mr. Karandikar, editor of the *Kesari* arrives at the date 'शुक्ल एकादशी' while Mr. R. V. Vaidya of Ujjain gives it to be 'कृष्ण द्वितीया'. We shall try to fix this 'Tithi' first on the evidence of the statement of Balarāma. We know definitely that Balarāma started for the pilgrimage on 'पुष्य नक्षत्र' and returned on the day on which the war ended. The 'नक्षत्र' on the day of his return was 'श्रवण' and the total number of days he passed in pilgrimage was 42. This is a good criterion to determine the 'नक्षत्र' on which the war started, because we know that the war continued for 18 days only.

In the '*Mahābhārata*' we find references to the 'नक्षत्र' on the days of arrivals or departures. At times the 'Tithi' is also referred to. No names of the days in a week are mentioned in the literature of the whole of the '*Mahābhārata*.' As the moon covers one 'नक्षत्र' per day and the position of the moon in relation to the 'नक्षत्र' can be observed every night, the counting of the days was equivalent to the counting of the 'नक्षत्र'. The names of the months were given by observing the 'नक्षत्र' with which the moon's position coincided, on the full moon day. There was thus the idea of a 'पक्ष', 'शुक्ल' or 'कृष्ण'. The fortnight or 'पक्ष' had, however, no fixed number of days, because it was a relation between the full-moon and the new-moon day, which is a variable quantity. It varied from 14 to 16 days normally, but very rarely it was even observed to be 13 days. Because Vyāsa says 'चतुर्दशी पंचदशी भूतपूर्वा च षोडशी । इमां तु नाभिजानेहं अमावास्यां त्रयोदशीं । चंद्रसूर्यो उभौ प्रस्तौ एक मासीं त्रयोदशीं । A solar eclipse can occur only on 'अमावास्या' and the lunar eclipse will occur on 'पौर्णिमा'. Of the two eclipses the lunar eclipse had taken place on कार्तिक पौर्णिमा'.

अलक्ष्य प्रभया हीनः पौर्णिमासीं च कार्तिकीं ।

चंद्रोभूत् अग्निवर्णः च पद्मवर्णं तभःतले ॥ भी० २.१३

It means that this peculiar phenomenon of two eclipses within a period of 13 days had occurred in the month preceding the month of 'मार्गशीर्ष' in which the war took place. As we know the total number of days for which Balarāma was on pilgrimage, we can say the war started on the 25th day from the day of his departure for the pilgrimage. We shall try to determine the place and the circumstances under which Balarāma left for the pilgrimage.

Udyoga 157th chapter tells that Kṛṣṇa had returned after the failure of his negotiations. At 'उपप्लव्य' Yudhiṣṭhira was performing the ceremony of appointing seven generals. While the ceremony was going on Balarāma entered the palace with अक्रूर, गद, सांब, उदव etc. He requested the audience that Duryodhana being also a relative, he too, ought to be given some help. But Kṛṣṇa was entirely against Balarāma siding with Duryodhana. Kṛṣṇa wished that if Balarāma did not wish to help the Pāṇḍawas he ought not to help Duryodhana also. Ultimately Balarāma yielded to submit to the wishes of Kṛṣṇa and decided to leave for pilgrimage, on the banks of the Saraswati on the very day with the persons mentioned above.

A second incident had happened on the same day and this gives an additive support to the event of the departure of Balarāma. Rukmi, a brother-in-law of Kṛṣṇa, had come to 'मुचिष्ठिर' to offer the help of his armies to Ydhiṣṭhir after Balarāma had departed. His help was, however, refused because he had first approached Duryodhana and when Duryodhana refused to accept his help he had come to the side of the Pāṇḍawas. Udyoga 158. 39, tells गते रामे तीर्थ-यात्रां भीष्मकस्य सुते तथा । उपाविशन् पांडवेयाः मंत्राय पुनरेव च ॥

The Pāṇḍawa army moved from 'उपप्लव्य' to 'कुलशेन' on the same day, after the ceremony of appointing the generals was over. Śalyaparva 35. 8, 15 रीहिणेवे गते क्षुरे पुष्येन

मधुसूदनः। पांडवेयान् पुरस्कृत्य इदं वचनं अवधीत्। निर्गच्छन् पांडवेयाः पुत्रेण सहिता मया॥ This reference gives a corroborative evidence to fix the date of the departure of Balārāma.

Thus, if we can determine the 'Tithi' on which there is the 'नक्षत्र' 'पुष्य' in the month of 'कार्तिक' the 'Tithi' of the commencement of the war must be the 25th day from the day of the departure of Balārāma and the Pāṇḍawa army from 'उपप्लव्य'. We know that on 'कार्तिकी पूर्णिमा' the moon is in 'Kṛttikā.' 'Puṣya' is the 5th from 'Kṛttikā.' Thus, on 'कार्तिक वद्य' 5th the 'नक्षत्र' must be 'पुष्य' 'Mṛga', is the 25th 'Nakṣatra' from 'Puṣya.' Hence the 'Tithi' of the war must be the 25th day from 'कार्तिक वद्य' 5th. But 'मार्ग शुक्ल' 13th. is the 25th day from 'कार्तिक वद्य पंचमी'. The 'Nakṣatra' 'Mṛga' will also be found to coincide the 13-14th of 'Mārgaśīrṣa.' We have now determined the 'Tithi' of the Kuru war and we find that it coincides with that given by the 'Bhārata Sāvitrī.

The 'Tithi' 'मार्गशीर्ष' 11th given by Mr. Karandikar is clearly wrong. Because there can never be the 'Mṛga Nakṣatra' on the 11th of 'Mārgaśīrṣa.' From 'Mṛga' the 'Śravaṇā' is the 18th and the 18th day from 'Mārgaśīrṣa Śukla' 13-14th is 'Pauṣa Śukla' 2nd. From the Indian almanac it can be verified that the 'Nakṣatra' 'Śravaṇā' is generally on that 'Tithi.'

Another important corroboration 'Mārgaśīrṣa Śukla' 13-14th. can be obtained from the date of the death of 'Ghaṭotkaca' who we know was killed on the night of the 14th day of the war. 'Jayadratha' was killed in the evening of the 14th day. The fight started again after a temporary rest of three hours. Drona, 186. त्रिभागं मात्रं सेवायां रात्र्यां युद्धं अवर्तत। The armies got tired and after Ghaṭotkaca was killed every one slept with the chariots yoked. Even the horses and elephants slept in their yoked position being very much tired एवं हयाः च नगाः च घोषाः च। युद्धात् विरम्य सुषुप्तुः युक्ता बाहेषु सर्वशः।

Then the moon rose in the east. A 'Muhūrta' afterwards there was the day-break.

ततः कुमुदनाथेन माहेन्द्री दिक् अलंकृता । ततो मुहूर्तात् भगवान् पुरस्तात् शशालक्षणः ।
अवर्णं वर्णयामास प्रसन् चार्द्रिं प्रभां प्रभुः । ततो मुहूर्तात् भुवनं ज्योतिर्मूर्तं इवाभवत् ।

From this description of the time difference between the rising of the moon and the sun we can determine the 'Tithi' of the day. On the 'Amāwāsya' day the moon and the sun rise together. On the 14th, the moon rises a 'Muhūrta' earlier than the sun. On the 13th, the moon rises two मुहूर्त earlier. As we know that the war started on the 13 of Mārgaśīrṣa, then on the beginning of the 15th day from this, the 'Tithi' must be the 13th of the dark half.

If we accept 'Mārgaśīrṣa Śukla' 11th as given by Mr. Karandikar to be the date of the commencement of the war, the 15th day from this day would be the 11th of the dark half and the moon will rise far earlier than the description in the text given above. This proves that the 'Tithi' 11th given by Mr. Karandikar does not tally with the description of the incidents. The war must end on the 14th of the dark half of 'Mārgaśīrṣa' if we accept the 'Mārgaśīrṣa Śukla' 11th as the day of the commencement of the war. The 'Śravaṇa Nakṣatra' is never on the 14th of the dark half of 'Mārgaśīrṣa.' There is no doubt about the 'Śravaṇa Nakṣatra' being there on the day on which the war ended.

The 'Puṣya Nakṣatra' at the time of the departure of Balarāma is thus a good stepping stone to work out days backwards and forwards to mark out the incidents before or after this event. Now, we shall work backwards and find out the 'Tithi' of the departure of the armies of Duryodhana and the 'Tithi' on which Kṛṣṇa started for negotiations from Upaplavya, and his meeting with Karṇa, to dissuade him from taking part in the war.

Kṛṣṇa had started from Upaplavya on 'Revatī Nakṣatra' and the month was full of moonlight. And it was

the end of the 'Śarad R̥tu'⁴ when the cold was just approaching (कौमुदे मासि रंजत्वा शरदं ते हिमागमे) This month can be either 'Āświna' or 'Kārtika.' The 'Revatī-Nakṣatra' is on the 12th. of the bright half of Kārtika and on the 14th of the bright half of Āświna. But we know that the Pāṇḍawa army had started on 'Kārtika vadya' 5th. on 'Pusya Nakṣatra.' There is hardly a week between the departure of Kṛṣṇa from Upaplavya and the departure of the armies of Pāṇḍawas from Upaplavya for Kurukṣetra. if we assume that it was on the 12th of the bright half of Kārtika, when Kṛṣṇa left Upaplavya. Before returning to Upaplavya Kṛṣṇa had seen Karṇa and tried to dissuade him from the war. The day on which they met was the 8th of the dark half, because Kṛṣṇa tells Karṇa that 'seven days later the new moon day will appear' (सप्तमात् चापि दिवसात् अमावास्या). Thus it is clear that Kṛṣṇa must have started from Upaplavya on the 14th. of the bright half of Āświna, and not on the 12th of the bright half of Kārtika.

Kṛṣṇa started early in the morning and stopped at 'Vṛkasthali' which he reached in the evening. The next day he left that place and reached Hastināpura in the evening. Here, he halted with Vidura.

While leaving for negotiations, Kṛṣṇa had given orders that a thousand armed men should follow him secretly. He argued that if the negotiations failed, he must be ready for the emergency of escape without being arrested. (Udyoga. 83. 11-13) "

‘रथ आरोप्यतां शंखः चक्रं च विद्या सह ।
उपासंगाः च शक्यः च सर्वप्रहरणानि च ॥
दुर्योधनः च दुष्टात्मा कर्णः च संह सौबलः ।
न च शत्रुः अवशेयो दुर्बलोपि बलीयसा ॥
प्रधातं देवकीपुत्रं परवीर राजो दश ।

(84.2.)

⁴ In the पौर्णिमांत method, the वैशाख ऋतु begins from कार्तिकी पौर्णिमा ।
F. 7

महारथाः महाबाहुं अम्बयुः शस्त्रपाणयः ॥

पदातीनां सहस्रं च साविनां च परंतप ।

The anticipation of Kṛṣṇa appears to be correct. For Udyoga—88. 12, tells that Duryodhana had actually put forth the suggestion in the presence of Bhīṣma and others, that he wanted their help in arresting Kṛṣṇa and that Kṛṣṇa should be given no hint of the move.

इदं तु सुमहत् कार्यं भुगु मे यत् समर्पितम् ।

परायणं पांडवानां नियच्छामि जनार्दनम् ।

तस्मिन् बद्धे भविष्यति वृष्णयः पृथिवी तथा ।

अत्रोपायान् यथा सम्यक् न बुद्धयेत जनार्दनः ।

न चापायो भवेत् कश्चित् तत् भवान् प्रवर्तयितु मे ।

Udyoga 91, tells that Kṛṣṇa went to the house of Duryodhana.

ततो दुर्योधनो राजा वार्ष्णेयं जयतां वर ।

न्यमंत्रयत् भोजनेन नाभ्यनंदत् च केशवः ॥

मृदु पूर्वं शठोदकं तदा दुर्योधनो अब्रवीत् ।

कस्मात् अन्नानि पानानि नागृहीः त्वं जनार्दन ॥

संबंधी दयितः चासि उभयोश्च हिते रतः ।

त्वं हि गोविंद धर्मार्थौ वेत्स्य तत्त्वेन सर्वशः ॥

कृष्णः—‘कृतार्था भुंजते दूताः पूजां गृह्णन्ति चैव हि ।

कृतार्थं मां सहामात्यं समर्चिष्यसि भारत ॥

दुर्योधनः—‘कृतार्थं वा अकृतार्थं च यतामो त्वां हि पूजितं ।

वरं वः नास्ति भवतः गोविंद न च विग्रहः ॥

कृष्णः—‘नाहं कामात् न समारंभात् न द्वेषात् नार्थकारणात् ।

न हेतुबादात् लोभात् वा धर्मं जह्यां कथंचन ॥

अकस्मात् चैव पार्थानां द्वेषणं नोपपद्यते ।

यः तान् द्वेष्टि सभां द्वेष्टि यः तान् अनु सभां अनु ॥

गुणवन्तं च यो द्वेष्टि तमाहुः पुण्ड्राधमं ।

सर्वं एतत् न भोक्तव्यं अन्नं बुद्धाभिसंहितम् ॥

संप्रीतिभोज्यानि अन्नानि आपत् भोज्यानि वा पुनः ।

न च संप्रीयसे राजन् नहि चापदगता वयम् ॥

After this talk Kṛṣṇa left the house of Duryodhana, and stayed with Vidura for his meals at night.

Udyoga 95, gives the description of the official gathering where Kṛṣṇa put forth the just and minimum demands of the Pāṇḍawas. He said that if that was not accepted, they must prepare for war.

Udyoga 130, tells that Duryodhana went out of the gathering and planned with Śakunī, Karna and Duṣṣāsana to arrest Kṛṣṇa, before he left the court, and thus end at one stroke, all the future attempts of the Pāṇḍawas to wage a war. Sātyakī who was present in the court, recognized that some foul play was intended. He immediately went out and asked Kṛṣṇa to keep his men ready at the gate, so that escape should be easily effected.

ययं एव हृषीकेशं निगूह्यीम बलादिब ।
निदधमा भविष्यति पांडवाः सोमकः सह ।
तेषां पार्थ अभिप्रायं अन्वबुध्यत सात्यकिः ।
तदर्थं अभिनिष्क्रम्य कृतवर्मणि अवधीत् ।
सभाद्वारं उपातिष्ठ क्षिप्रं योजय वाहिनीम् ।
आचष्ट तं अभिप्रायं केशवाय महात्मने ।

Udyoga 131, tells that Kṛṣṇa told the audience that Duryodhana planned to arrest him, thinking that he (Kṛṣṇa) was unaided.

“एकोहं इति यत् मोहात् मन्यते मां सुयोधनः ।
परिभूय सुदुर्बुद्धिः गृहीतुं मां चिकीर्षते ॥”

As Kṛṣṇa was prepared for the emergency, it appears that Kṛṣṇa managed to get out of the court, after some clash of arms.

Udyoga 153, tells प्रति याते तु बाशाहं राजा दुर्योधनः तदा । कर्णं दुःशासनं चैव शकुनिं चावधीत् इदं । शिबिराणि कुरुक्षेत्रे कियतां वसुधाधिपाः । प्रयाणं बुध्यतां अद्य द्यौभूत इति मा चिरम् । This shows clearly that the king Duryodhana issued the orders that the armies should start for Kurukṣetra the next day.

Udyoga 155-56, tell, “व्युष्टायां वै रजन्यां हि राजा दुर्योधनः तदा । ततः क्षातनर्भं भीष्मं इदं वचनं अवधीत् । भवान् उशनसा तुल्यः स नः सेनापतिः भव । असंहार्यः स्थितो धर्मं हितेवी च सदा मम ।” This shows that on the

next day Duryodhana^{*} requested Bhīṣma to be his general. Bhīṣma accepted the offer on the condition, that as long as he lived, there should be no other general. "Karna always envies me, so either let him be the first general to command the armies, or let me be the first to command. I cannot tolerate this 'अर्धरथः' Karna along with me. Drona has already given him the nickname 'अर्धरथः,' because he always bragged about his valour, but when the time comes he gets defeated and runs away.

सेनापतिः तु अहं समये नापरेण ते ।

कर्णो वा युद्धयतां पूर्वं अहं वा पृथिवीपते ॥

द्रोणः—'रणेरणे अभिमानी च विमुक्तः च अपि वृष्यते ।

घृणी कर्णः प्रमादी च तेन मे अर्धरथः मतः ॥

Karna was naturally enraged and took the oath that he would not fight while Bhīṣma was living. Then the ceremony of appointing Bhīṣma as the general was gone through, and the king gave orders that as the 'Nakṣatra' was 'Puṣya' on that day, they should start for Kurukṣetra that very day.

ततः सेनापतिं चक्रे विधिवत् भूरि दक्षिणं ।

धृतराष्ट्रात्मजो भीष्मं सोमविभक्तो व्यरोचत ॥

आज्ञापयत् च राजा तान् पार्थिवान् नष्टचेतसः ।

प्रायाध्वं च कुरुक्षेत्रं पुण्यः अद्य इति पुनः पुनः ॥

While the 'Abhiṣeka' ceremony was going on, there was a shower of blood and flesh from the sky. प्रादुरासन् अनघे च सर्वशिरकर्षर्षः । सेनापत्ये यदा राजा गांगर्यं अभिविभक्तवान् ॥ ततः सेनापतिं कृत्वा भीष्मं परबलार्धनं । स्कंधवारेण महता कुरुक्षेत्रं जगाम ह । Udyoga 157. 28, 31.

Udyoga 140. 1, " उपारोष्य रथे कर्णं निर्व्यातो मधुसूदनः । " shows clearly that Kṛṣṇa took the opportunity of dissuading Karna from taking part in the war. In this talk Karna gives the position of 'Rāhu' and the Sun, and predicts that a solar eclipse may take place. Karna did not accept the proposal of Kṛṣṇa. Then Kṛṣṇa tells, 'सप्तमात् विषतात् अमावास्या भविष्यति'

The position of the Sun is between हस्त and Citrā.⁵ Seven days later the moon also arrived there because it was 'Amāwāsya.' Citrā is seventh from Puṣya. Thus we know that when the meeting between Kṛṣṇa and Karna took place, the नक्षत्र was Puṣya, and the 'tithi' was Āświna Vadya 8th by the 'Amānta' method, or Kārtika Vadya

⁵ Here I take the opportunity of rectifying a faulty argument in my article in the November 1945 issue, on the 15th page and in the note on the 17th page. I thank Mr. Iyer for pointing out the error. His article has appeared in Nov. 46 issue. At the end of the present article, it will be found that I have corrected another error in the November, 45 article.

I had argued in that article that because the two eclipses separated by 13 days occur always in the bright fortnight and never in the dark one, the solar eclipse must precede the lunar eclipse. This argument was wrong. The correct proof for my statement— "A solar eclipse followed by a lunar one on the Kārtika full moon,—" is as follows. Karna was accompanied by Sañjaya (सहास्माभिः (संजय) निवृत्ते राधेयो बीनमानसः Ud. 143. 52) when the meeting between Karna and Kṛṣṇa took place in the chariot of Kṛṣṇa. 'आरोप्याथ रथे कर्णं प्रायात् । मंत्रयामास च तदा कर्णेन सुचिरं सह Ud. 137.29 Karna says विशेषेण हि वार्ष्णेय चित्रां पीडयत ग्रहः । सोमस्य लक्ष्म व्यावृत्तं राहुः अर्कं उपैति च Ud. 143. 10. Kṛṣṇa also says "ब्रूयाः कर्ण इतो गत्वा द्रोणे शान्तनवं कृपं । संप्रामं युज्यतां तस्यां (अमावास्यां) तामाहुः शक्रदेवतां ॥" The words 'चित्रां व्यावृत्तं राहुः अर्कं उपैति ।' do clearly indicate that the motion of Rāhu is a receding one and distinct from the motion of the sun, which is from Citrā to Swātī, etc. Kṛṣṇa tells that the Amāwāsya will take place near the Citrā star चित्रा=शक्रदेवता) after seven days. Karna even predicts a solar eclipse on that Amāwāsya near the Citrā star. We know that Kṛṣṇa left for negotiations one day previous to the Āświna full moon. Therefore the Amāwāsya must be that one which followed Āświna Paurṇimā. Vyāsa also corroborates the position of the Sun and the Rāhu on this Amāwāsya 'चित्रास्वात्यंतयोर्मध्ये विष्ठितः पुरुषः ग्रहः । रोहिणीं पीडयत्येवं उभौ च शशिभास्करो ॥ चंद्रसूर्यौ उभौ प्रस्ती एकमासी त्रयोवशी । अपर्बणि ग्रहेणेती प्रजाः संक्षययिष्यतः ॥ Bhīṣ. 3.28. About the lunar eclipse near the Kṛttikā star we are quite certain. On the Amāwāsya following the Kārtika Paurṇimā, the sun and the moon come in Viśākhā. The position of Rāhu does not change much during a month. Thus the Rāhu in Citrā cannot eclipse the sun in Viśākhā.

Thus it will be seen that the basic statement from which I have deduced the exact year of the war is correct, though my argument was wrong. The error in my argument does in no way vitiate the superstructure built on a correct basis, as might possibly appear by reading the objections raised by Mr. Iyer in his article. His criticism about the earthquakes will be answered in a separate article.

8th by the Paurṇimānta method. The army of दुर्योधन left Hastināpura on the same day. The army of the Pāṇḍawas on the other hand must have left Upaplavya after Kṛṣṇa returned to the Pāṇḍawas. It is thus clear that the Pāṇḍawa army moved for Kurukṣetra 27 days after the departure of the Kaurawa army, because the moon arrived in Puṣya 27 days later. The 'tithi' of the departure of the Pāṇḍawa army was thus Kārtika Vadya 5th, which I have already established.

It was generally believed so far, that both the armies started for Kurukṣetra on one and the same day. No explanation could be offered to the clear statement in the *Mahābhārata* that the occasion was very inauspicious for the Kaurawas, while it was most auspicious for the Pāṇḍawas. The statements were considered as interpolations. But we see now that the statements are correct. The Pāṇḍawa army started after the two eclipses (13 day पक्ष = क्षय पक्ष bad omens) were over.

Now, let me turn to the problem of the exact number of days that Bhīṣma was lying on the arrow-bed. This problem would not have been difficult to solve, if the 'Tithi' on which Bhīṣma left this mortal body was known definitely. For the difference between the 'Tithi' on which Bhīṣma lay on the arrow-bed and 'Tithi' on his 'प्रयाणकाल' is clearly the number of days for which Bhīṣma was on the arrow-bed.

There are four references which give the 'Tithi' of the departure.

(1) माघोऽयं समनुप्राप्तः मासः सौम्यः युधिष्ठिर ।
त्रिभागशेषः पक्षोऽयं शुक्लो भवितुं अर्हति ॥

(2) शुक्लपक्षस्य अष्टम्यां माघमासस्य पाण्डव ।
प्राजापत्ये च नक्षत्रे मघ्यं प्राप्ते दिवाकरे ॥

(3) अर्जुनेन हतो भीष्मः माघमासे सिताष्टमी ।

(4) 'Māgha Śukla 8th' is traditionally observed as the day of his departure.

In the 3rd. reference there is the possibility of the interpretation 'असिताष्टमी' meaning the dark half.

I have already proved without ambiguity that the 'Tithi' on which the war started was 'Mārgaśīrṣa Śukla 13th' and the 'Nakṣatra' was 'Mṛga.' The day on which Bhīṣma was defeated was the 10th, day of the war.

वधमेऽहनि राज्ञेऽर्धे भीष्मार्जुनसमागमे । न तस्यासीत् अनिभिन्नं गात्रे ह्यंगुलं
अंतरम् । किञ्चित् शेषे दिनकरे प्राक्शिरः प्रापतत् रथान् । धरणीं न स पस्पर्श शरसंघैः
समावृतः । पतन् स बहुशो चापि दक्षिणेन दिवाकरं । धारयामास च प्राणान्
पतितोऽपि महीतले । अपन् महोपनिषदं योगं आस्थाय वीर्यवान् । उत्तरायणं
अन्विञ्चन् भीष्मः कुरुपितामहः ॥

The 'Tithi' on the day of the fall must therefore be 'Mārgaśīrṣa Vadya 7th' by the 'अमांत' method, or 'Pauṣa Vadya 7th' by the 'पौर्णिमांत,' method.

The difference between 'Mārgaśīrṣa Vadya 7th' and 'Māgha Śukla 8th' is 45 days only. It might be thought that the solution of the problem was easy. But that is not the case. Because 'Bhīṣma' is telling himself that it was अर्धं शुक्लः पक्षः । त्रिभागशेषः माघः मासः । (In the पौर्णिमांत method शुक्ल अष्टमी means that $\frac{3}{4}$ of the month is over), and still he says 'अष्टपंचाशत् रात्रयः शयानस्य अद्य मे गताः' to Yudhiṣṭhira who had come to Kurukṣetra, because he was asked to return there on that day. This statement of 58 days has started the puzzle.

In order to bridge over the difficulty, Nīlakaṇṭha the commentator on the *Mahābhārata*, proposes in his commentary on the M. 6. 17. 1, that 'असिताष्टमी' should be taken as the day of departure of Bhīṣma, because 15 days get added to the 45 days and the total number of days amount to 60. But instead of getting out of the difficulty the problem became more complicated. For in Śānti, 51. 14, Kṛṣṇa, Yudhiṣṭhira and others have gone to Bhīṣma after the formal coronation ceremony was over. Then Bhīṣma was requested by Kṛṣṇa to instruct Yudhiṣṭhira of the duties of a ruler. Bhīṣma first complained and said that as his limbs were aching he would not be able to speak. But Kṛṣṇa insisted that he was the proper authority and there would be no more limb aching. 'पंचाशत् वद' च कुरुप्रवीर शेषं दिनानां तव जीवितं च । व्यावृत्तमाने तु सुखे

उदीचीन् । 56 days still remain for your departure from this world. For, the sun will turn north then.

Nilakanṭha could not reconcile this verse by taking 56 to be the meaning of 'पंचाशत् वद्' for he must count days up to the arrival of Kṛṣṇa to Bhīṣma, and then add 56 days. In the commentary on this verse he has counted the days up to the arrival of Kṛṣṇa to 'Kurukṣetra.' भीष्मस्य शरतस्य-क्षयनानंतरं अष्टौ दिनानि युद्धं । ततो बुधोषनाशौचं युयुत्सोः षोडश दिनानि । पंचविंशे सर्वेषां श्राद्धदानं, षड्विंशे पुरप्रवेशः । सप्तविंशे रात्र्याभिषेकः । अष्टाविंशे प्रकृतिसात्वतं आभ्युदायिकं दानं च । ऊनत्रिंशे भीष्मप्रत्यागमनम् । Thus on the 29th day, from the fall of Bhīṣma, Kṛṣṇa sees him at Kurukṣetra. As the total number of days of lying on the arrow-bed cannot be greater than 58, and since Kṛṣṇa has come on the 29th day, the remaining days amount to 30 only. He gets the meaning of 30 from the expression पंचाशत् वद् च as पंच वद् च षट्बारं आवर्तिताः । वद् इति रीत्या त्रिसत् five times six makes thirty.

By counting the days up to the arrival of Kṛṣṇa and showing it to be 28, Nilakanṭha has again added to his own confusion. For Śānti 1. 2. कृतोदकाः ते सर्वेषां न्यवसन् पांडुनंदनाः । शौचं निर्वर्तयिष्यंतः मासमात्रं बहिः पुरात् । tells clearly that the Pāṇḍawas remained outside the town for 30 days after they had finished the 'उदक' ceremony. The 'उदक' ceremony can take place only after the war was over. We know the 'Tithi' as well as, the 'Nakṣatra' on which the war ended. The 'Nakṣatra' was 'Śrawaṇā', and the 'Tithi' was 'Pauṣa Śukla 2nd.' One month after this, means 'Māgha Śukla 2nd.' There are only 6 days for 'Māgha Śukla 8th,' and 21 days for 'Māgha Vadya 8th.'

While commenting on the above verse, he has made matters still worse and more complicated. He writes गंगातीरे पुरात्⁶ बहिः मासमात्रस्य प्रयोजनं न तु अत्र शाबाशौचशुद्धिः मासमात्रेण

⁶It is interesting to note that सृजय came back to वृतराष्ट्र from कुक्कुट before noon, on the 19th day and told him "गुरुणा ज्ञानपूर्वकं श्रेय-कार्त्तवि कारम् ।" वृतराष्ट्र started with the ladies. When they crossed a

इति विवक्षितं। द्यूतो मातेन द्यूद्यति इति मनुवाक्यविरोधात्। संग्रामहतानां पिंडाः सद्य एव द्यूद्यति इति उक्तं मनुना। अतः द्वावशाहेन भूपतिः द्यूद्यति एतत् वचनं अपि निरस्तं। सौप्तिके पशुवत् हतानां अशौचं द्वावशाहं। He adds the 18 days of the war to the 12 days of 'अशौच' and gets the total of 30 days.⁷

But we know from his own quotation that 'Yuyutsu', 'being a son of 'Dhṛtarāṣṭra from a 'Vaiśyā' wife, is given 'अशौच' for 16 days after the war was over. Nilakaṇṭha has given a queer derivation even for अष्टयंचाशतं रात्रयः. It is as follows—अशतं शतहीनं यथा स्यात् तथा अष्टयंच। अष्टयंच अशत् रात्रयो व्यतीताः। विलोमशोधनात् अष्टयंचाशत् ऊनं शतं रात्रयः, द्वावत्त्वारिंशत् इत्यर्थः। 100-58=42, (Vide comentary on M. 6. 17.1).

From this it becomes clear that Nilakaṇṭha has not given a solution of the problem, but he has added to the difficulties. The interpretations given by Nilakaṇṭha are completely erroneous. The following statement from the *Mahābhārata*, which was overlooked by Nilakaṇṭha, will prove conclusively that the whole line of approach was incorrect. सोमिषिक्तो महाप्राज्ञः प्राप्य राज्यं युधिष्ठिरः। उषित्वा शबरीः

distance of two miles they met कृप, अश्वत्थामा etc., who had killed the sons of द्रौपदी while asleep and were running away because they feared that the Pāṇḍavas would take revenge. युधिष्ठिर had sent नकुल to bring द्रौपदी etc. from उपप्लव्य, and she had arrived early in the morning. When युधिष्ठिर knew that द्यूतराष्ट्र started for the उत्तरकिंश he went to meet him. Then all of them met at the Gaṅgā near हस्तिनापुर and performed the उदक ceremony. Here all of them stayed outside the town for one month. When नीलकण्ठ includes the 18 days of war for getting the total 30, he has forgotten that the Pāṇḍavas were outside हस्तिनापुर for 13 years. They had come to the outskirts of हस्तिनापुर first on the 19th day of the war.

⁷ It is interesting to note that 30 days of Aśauca on the banks of the Gaṅgā after the end of the Kuru war need not be considered as an exception, which requires an explanation offered by Nilakaṇṭha in his commentary. For, *Mbb.* I. 126.29, पितृलोकं गतः पांडुः इतः सप्तवशोऽहनि and 127. 16, 32, रमणीये बनोद्देशे गंगातीरे समे शुभे। शिशियरे पांडवैः सार्धं नगरं द्वावशस्रस्रः॥ tell clearly that the Pāṇḍava children were brought to Hastināpura by the Rṣis on the 17th day after the death of Pāṇḍu and they passed 12 more days on the bank of the Gaṅgā in mourning. This means a total Aśauca for one month.

भीमान् पंचाशत् नगरोत्तमे । सस्मार कौरवाग्र्यस्य समर्थं पुत्रवर्धनः । वृष्ट्वा निवृत्तं आवित्यं प्रवृत्तं चोत्तरायणम् । आसत्साव कुक्षेत्रे ततः क्षांतनर्चं नृपः ॥ (Anu, 167. 5. 3. 13.). The word 'पंचाशत्' will mean only 50, and nothing else. 'पंचाशत्' may be twisted to mean 'पंच अशत्' or 'पंच आशत्', but 'पंचाशत्', will never mean that. The Pāṇḍawas had gone to Kurukṣetra after the coronation. Then Bhīṣma began his instructions regarding the duties of a ruler, and they continued for 3 days. Then Vyāsa requested Bhīṣma to stop his lecturing as Yudhiṣṭhira had become calm and he must return to Hastināpur. Bhīṣma said प्रविशस्व पुरीं राजन् ध्येतु ते मानसो ज्वरः । आगतव्यं च भवता समये मम पार्ष्विच । विनिवृत्ते दिनकरे प्रवृत्ते च उत्तरायणे । तथेत्युक्त्वा च कर्तव्यः प्रययौ नागसाङ्गयम् । (Anu. 166. 3-17). This shows that Yudhiṣṭhira had gone back to Hastināpur with the consent of Bhīṣma and with a promise to return on the day of the northward shift of the sun.

We know that when Kṛṣṇa requested Bhīṣma to instruct Yudhiṣṭhira in 'राजधर्मं' Kṛṣṇa told Bhīṣma that there were yet 56 days for the northward shift of the sun. This tallies with the stay of 50 nights at Hastināpur of Yudhiṣṭhira, and the halt at Kurukṣetra for 3 to 6 days to hear the instructions from Bhīṣma. Further we can also account for the 58 days of 'शरशय्या' lying on the arrow-bed, as mentioned by Bhīṣma.

This shows clearly that Yudhiṣṭhira was late by two days. Because Kṛṣṇa had already told him that the sun would shift northwards after 56 days. Bhīṣma being on the arrow-bed, naturally felt this delay of two days as if it was a hundred years. Thus it will be seen that we are not required to twist the meanings of the expressions पंचाशत् वद् च अष्ट पंचाशत् राजघ्नः नासनात्रं बहिः पुरात् and others.

Now, we shall turn to. 'Māgha Śūkla 8th.' 'माघ अक्षिताष्टमी' can be ruled out for the following reasons. The 'Nakṣatra' on the day of the passing away of Bhīṣma was 'Prā-jāpatya' which means 'Rohiṇi.' On 'Māgha Vadya 8th'

the 'Nakṣatra' is 'Jyeṣṭhā' and never 'Rohiṇī.' The evidence of the *Gītā* is also against the 'Vadya Pakṣa.' For the *Gītā*, VIII says that death in the dark half of a month means 'Kṛṣṇa-gati.' If Bhīṣma could hold his 'Prāṇa' in order to avoid 'Dakṣiṇāyana,' he could certainly have waited for a week more to get the 'Śukla Pakṣa.'

Thus on 'Māgha Śukla 8th,' Bhīṣma passed away. The Indian almanac (पञ्चांग) will also show that the 'Rohiṇī Nakṣatra' coincides with 'Māgha Śukla 8th.' This shows that 'Mārgaśīrṣa Vadya 7th' is unalterable and 'Māgha Śukla 8th' is also certain. If both these 'tithis' cannot be altered, it might be thought, that it is impossible to increase the number of days between the two. The difference between them will always be 45 days. But it is not so. For as there are 'अधिक' months, we can increase the number of days by 30, 60 and so on without changing the 'tithis.' Thus the number of days for which Bhīṣma was on the arrow-bed will be either 45 or 75 or 105, without altering the 'tithi' namely 'Māgha Śukla 8th.' It means that either one intercalary month was added, or two months were added. The value 75 can be easily discarded. For we know from the two statements 'मासमात्रं बहिः पुरात्' and 'पञ्चागतं शबरीः नगरोत्तमे'। (30 + 50 = 80) that Bhīṣma was on the arrow-bed for more than 80 days.

Now, if we are able to show that Bhīṣma was on the arrow-bed for 105 days, it means that two intercalary (अधिक) months must have been added in that year.

The following is the sequence of the main events which took place, after the death of Duryodhana on the 18th day of the war up to the time of the one month's stay of the Pāṇḍawas outside Hastināpura.

(a) Aśwatthāmā kills Dhṛṣṭadyumna, Yudhamanyu, Śikhaṇḍī, the five sons of Draupadī and others in the night, while they were sleeping in their camps. He ran away

with his confederates Kṛpa and Kṛtawarmā, for he feared that the Pāṇḍawas would catch him if they knew that he had killed the young boys. (b) Yudhiṣṭhira got the news from the chariot driver of Dhṛṣṭadyumna, who had escaped from the slaughter, early before the dawn. (Saup. 10). (c) Yudhiṣṭhira sent Nakula to bring Draupadī, who was at Upaplavya. (Sauptika, 11. 6.). (d) Sañjaya could not go to Hastināpura in the night of the 18th day as usual, because he was wounded on that day. So he left the battle field the next morning and reached Hastinapur by the noon. (Śalya 1. 14 25.) (e) Sañjaya asks Dhṛtarāṣṭra to do the funeral rites. (Strī. 1.8). (f) Dhṛtarāṣṭra and the ladies left for Kurukṣetra. (Strī, 10. 6. 16.) (g) When the party had crossed a distance of two miles they met Aśwatthama and others, who were running away. (Strī, 11. 1.). (h) The Pāṇḍawas left Kurukṣetra to meet Dhṛtarāṣṭra, when they learnt that Dhṛtarāṣṭra started for Kurukṣetra. They met Dhṛtarāṣṭra on the river Gaṅgā two miles from Hastināpura (Strī. 12. 6. ते गंगां अनुवृत्तानि क्रौञ्चान् स्त्रीणां ददर्श ह (i) The party did not return to Kurukṣetra and the women did not weep actually over the bodies of their beloveds, as is commonly supposed. Because, Strī, 16. 3, 4, clearly tells 'विष्यन्तानबलोपेताः विविधं पयंदेवयत् । वदन्तु . . इरात् अपि यथातिके ॥ (j) The 'उवक' ceremony was performed on the banks of the Gaṅgā." ते समास्ताव तु गंगां तु शिवां पुण्यजलोचिताम् । उवकं चक्रिरे सर्वा दहत्यो भूषा दुःखिताः ॥ (Strī. 27, 1, 3.). (k) The party stayed there for one month. (Śānti, 1, 1, 2.).

From Śānti, 1.15, " किन्तु वक्ष्यति बाष्णोऽपि बधूः मे मधुसूदनम् । द्वारका-वासिनी कृष्ण इतः प्रतिगतं हरिम् । we know that Kṛṣṇa had gone back to Dwārakā with Subhadrā.

Again from Śānti, 37.4, धर्मचर्या च राक्ष्यं च नित्यमेव विदुष्यते । एवं मुह्यति मे चेतः क्षितमानस्य नित्यशः ॥

व्यासः—'भोतुं इच्छसि धर्मं चेत् निजिलेन नराधिप । प्रेहि भीष्मं महाबाहो वृद्धं कुशपितामहं ॥ युधिष्ठिरः—'धातयित्वा तमेवाजौ छलेन अजिह्वं योनिर्न । उपसंस्पृष्टं अर्हामि तमहं केन हेतुना ॥

कुण्डः—नेदानीं अति निर्बलं शोकं त्वं कर्तुमर्हसि । यदाह भगवान् व्यासः तत्कुण्डं नृपोत्तम । चातुर्वर्ष्यं महाराज राष्ट्रं ते कुण्डं जागलं । कुण्डं त्रिवं अभिगच्छन् लोकस्य च हितं कुण्ड it will be seen from this quotation that Kṛṣṇa has come back and he is asking Yudhiṣṭhira not to keep on weeping longer than a justified limit. Yudhiṣṭhira was feeling a bit ashamed⁸ to approach Bhīṣma, who was lying on the death bed while fighting with Yudhiṣṭhira himself.

Śānti 37, 32 tells that Yudhiṣṭhira entered the town in a new chariot to which 16 bullocks were yoked. Śānti 39, tells that Brahmins uttered 'पुण्याहघोष' when Yudhiṣṭhira entered the palace. There was a slight incident which marred the celebrations for a short time. There was a man called 'चार्वीक' who was a friend of Duryodhana. He mixed among the Brāhmaṇas who were uttering the blessings (आशीर्वाचन). He said "यिक् भवंतं कुनूपतिं ज्ञातिघातिनं अस्तु वै । घातयित्वा गुरुन् चैव मृतं श्रेयः न जीवितम् ॥" of course the Brāhmaṇas dragged this man and he was driven out.

Śānti 40, tells that Yudhiṣṭhira was crowned by Kṛṣṇa अम्यविचत् पतिं पृथ्व्याः दातार्हः तु युधिष्ठिरं । पांचजन्याभिषिक्तः च राजा अमृतमृक्षोभत् । Śānti 42, tells that Yudhiṣṭhira performed the 'Śrāddha'.

ततो युधिष्ठिरो राजा ज्ञातीनां ये हतायुधि ।

आह्वानि कारयामास तेषां पुत्रकं उदारधीः ।

Śānti 46. 30-32, tell that Kṛṣṇa and Yudhiṣṭhira started for Kurukṣetra to meet Bhīṣma. Kṛṣṇa after reaching

⁸ We get a very interesting verification for the statement that Yudhiṣṭhira was feeling shy to approach Bhīṣma, from the following reference to it in Śānti. 35. Bhīṣma says, "Let Yudhiṣṭhira ask me now any question." Kṛṣṇa says, "The King Yudhiṣṭhira feels ashamed to approach you. He thinks that you would curse him if he approached." Bhīṣma says, "Just as it is the duty व्रतं of a Brahmin to practice 'tapas,' to study and to acquire knowledge, similarly it is the duty of a Kṣatriya to kill the bodies in a battle. It does not matter whether the bodies belong to the brothers, fathers, grandfathers, relatives or even the revered teachers. As the battle is for chastising the wrong-doers, it is the duty of a Kṣatriya to kill them."

Bhīṣma tells him that there were still 56 days for the sun to shift northwards.

Thus the total number of days is $39 + x + 56$. But we know that the total must be equal to 105 only. The value of x must be therefore 10 days. The coronation, the śrāddhas of course required this ten days interval.

This addition of 60 days is apparently contradictory to the present day practice of adding one lunar month only to make up the difference between the solar and the lunar year. But at the time of the Kuru war, two months (द्वौ मासौ = ऋतु) were added at once, after every five years, to make up the difference. The late Rao Bahadur C. V. Vaidya has proved the same thing on page 610, of his “भारताचा उपसंहार.”

From astronomy it can be proved that in the year 3018 B. C. the difference between ‘Mārgaśīrṣa Vadya 7th’ and the date of the northward shift of the sun was 105 days. In the year 2448 B. C. the same difference was 96 days, while in 2060 B. C. the difference was 88 days.

But as we know that Bhīṣma was on the arrow-bed for 105 days, this gives an additional confirmation to the statement that the war took place before 3000 B.C.

My astronomer friend, Mr. M. Raja Rao, has given the above calculation and pointed out some minor errors regarding the calculations of the dates of the eclipse given in my article, “*The exact date of the Kuru war*,” published in the November issue of the year 1945. He has worked out a calendar for the correct year of the war in 3018 B. C., from the day of the departure of Kṛṣṇa for the negotiations up to the passing away of Bhīṣma on Māgha Śukla 8th. I acknowledge the errors and I thank Mr. M. Raja Rao for sending me the corrected calendar of the events, which I am reproducing below from his letter.

No.	Year 3018 B.C. Event.	Calender of events Vaiśākha date 1st, of Vaiśākha śukla.	Amānta lunar date.	Nakṣatra.
1.	Kṛṣṇa leaves Upa- plavya for the negotiations.	162.	Āświna 15th.	Revatī.
2.	Duryodhana army starts.	170.	Āświna 22nd.	Puṣya.
3.	Dīpāwali, n e w moon.	179.	Āświna 30th.	Citrā.
4.	Kārtika full moon.	192.	Kārtika Paur- ṇimā.	Kṛttikā.
5.	Bal a r ā m a and Pāṇḍava army starts.	198.	Kārtika 21st.	Puṣya.
6.	Battle begins ...	221.	Mārgaś i r ṣ a 14th.	Mṛga.
7.	Bhīṣma falls ...	230.	Mārgaś i r ṣ a 23rd.	Citrā.
8.	Gadā-Yudha. (Mace fight).	239	Pauṣa (Adhika) 2nd.	Śrāvāṇā.
9.	Formal coronation of Yudhiṣṭhira.	277.	Pauṣa (Nija) Māgha (Adhika)	Punarvasu.
10.	Visit to Bhīṣma.	279.
11.	Nirvāṇa of Bhīṣma.	335.	Māgha (Nija) śukla 8th.	Rohiṇī. (Prājāpatya.)

The sun shifted northwards on the 17th, January, 3017 B. C. which is the 335th, day of the year. As Bhīṣma fell on 230th day, the days on the arrow bed are 105, which is already proved in the above article.

The date of the war which was given as 5th December 3016 B. C., is clearly wrong. The two eclipses occurred on 31st. August and 13th. September respectively.

I had given the dates of the eclipses to be 29th. October and 11th, November. They would be found to differ from the corrected dates by 60 days. I have already proved that two months (60 days) were being added every 5th year, at the time of the Kuru war to make up the difference between the Solar year and the Lunar year. The year of the war was the last year of the five year period, and 60 days were added at the end of this year. Therefore, Pauṣa and Māgha were the two Adhika (added) months for the year.

THE AIMS AND METHODS OF ARCHAEOLOGY¹

By B. B. LAL

The aim of Archaeology

ARCHAEOLOGY is a science of critical appreciation and of reconstruction. Its object is to trace out the whole history of man since his first appearance till almost modern times on the basis of the remains he has left. The duty of an archaeologist, therefore, is not simply to uncover structures and to collect beads, pottery and ornaments but to reconstruct the history of the place through all its stages. Walls are dumb and so are other articles. These objects by themselves are not more important than the conditions in which they have been found. It is not enough to know that the articles are X, Y and Z. It must be learnt without ambiguity that they are X/Y/Z.² and are neither Z/Y/X nor Z/X/Y nor Y/Z/X nor Y/X/Z nor X/Z/Y. What we actually want is the inter-relation of the finds. And this is best possible through "stratification," which is the keynote of modern excavation.

Stratum or layer

Stratification is nothing but the ascertainment of the relationship of one stratum with another. A stratum or, more familiarly, a layer, is a deposit of earth, or mud or stones or bricks or of all of them, which has been laid down at a time, and the top of which represents the surface

¹ It is proposed to present in this article some of the methods of field archaeology brought to India by Dr. R. E. Mortimer Wheeler, the present Director General of Archaeology in India.

² X/Y/Z represents that X is later than Y and Y is later than Z.

of the ground at that particular period. This change of layer is discernible through changes in the soil as we dig down.¹

The method: Its origin.

Formerly depth was the basis of sequence dating and walls served as the basis of a stratum. But the modern method took its clue from geology, and may be illustrated by an example from the geology of Sweden. There the succession of banded clays has been recognized as representing successive deposits left by retreating ice every summer, and illustrate in the clearest form the principle of chronological sequence represented by the superimposition of one deposit over the other. In the figure given below (fig. 1) an object in band 1 was

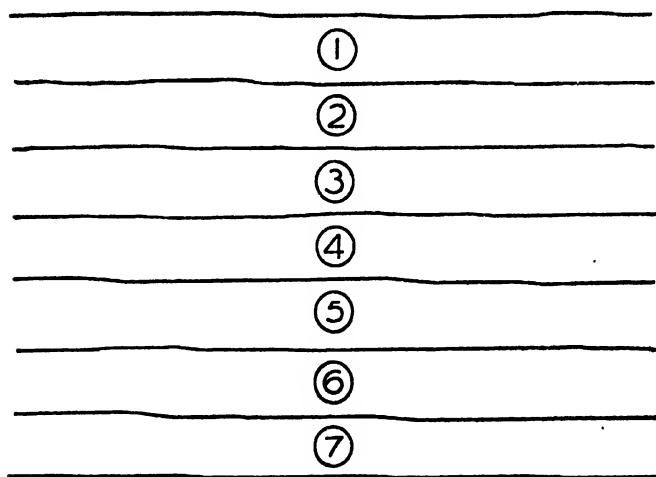


Fig. 1.—Clay bands

definitely deposited later than one in 2; an object in 6 was deposited earlier than one in 5, and so on.

¹ But a change of soil does not always represent a change in stratum, for one stratum may also consist of more than one soil,

Layers take varied shapes

But if layers were as horizontal as these, there would have been no trouble at all and even the former method of recording an object simply by its depth would have been satisfactory. In actual practice layers are found to be more illusive and they take all sorts of curves and shapes.

The following illustration (fig. 2) would explain the essential spirit behind the new method.

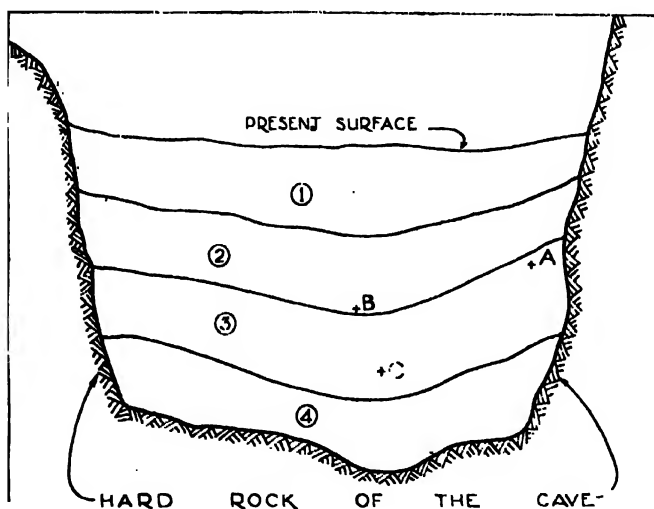


Fig. 2.—Section inside a cave

The original bottom of this cave is undulating and has a depression in the middle. The people who dwelt in it did not bother themselves about the floor, and the result was that all the deposits that came afterwards conformed more or less to the original depression. Three objects A, B and C have been discovered (cf. their positions in the figure) respectively at depths of 4 ft., 5 ft. 6 ins. and 7 ft. below the present surface. But their chronological sequ-

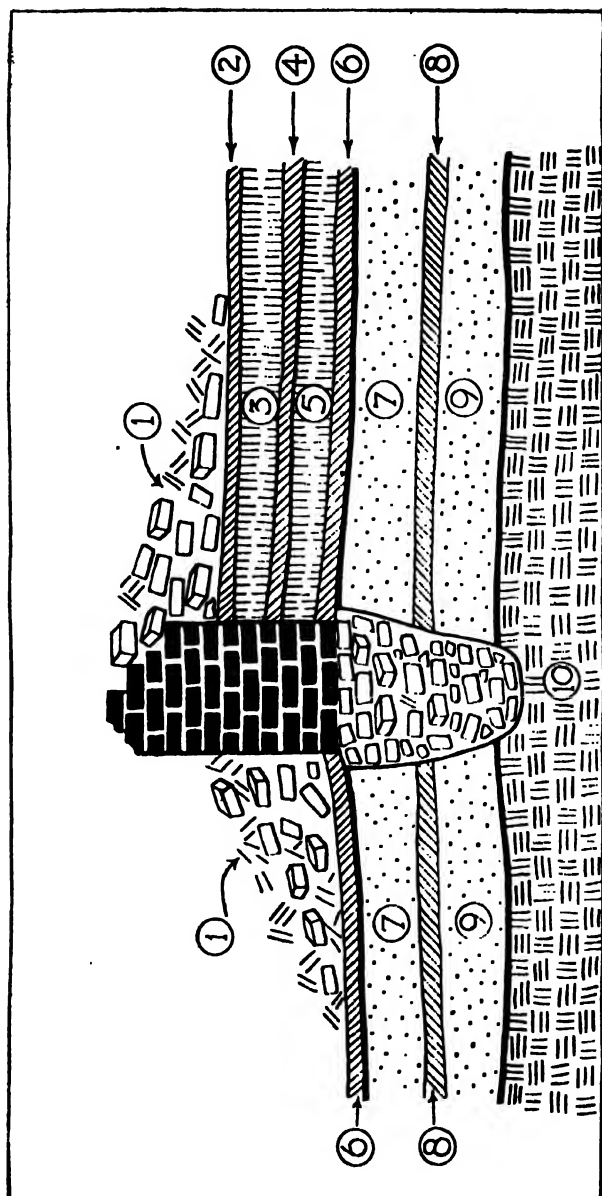


Fig. 3.—Layers and structures

ence is not A/B/C. It is B/A/C. It is clear without doubt from the section that object B was laid down later than both A and C and is, therefore, later in point of time than both.

Layers and their relation with structures

Besides ascertaining the inter-relation of these layers we have also to find out their relation with the houses and structures to which they run.

In fig. 3, layer 10 is the natural hard earth. Layers 9, 8 and 7 have been cut through for the foundation-trench of the wall, and are therefore earlier than the wall. Layer 6 is the first one to run up to the wall and therefore came into existence immediately after the wall was constructed. Layers 5, 4, 3 and 2 came successively in the life-time of the wall. Layer 1 represents the fall of the wall. Now if we can date an object in layer 7 and another in layer 6 we can very accurately fix the date of the wall.

Let us now see how this method of retaining vertical sections helps us in discovering the story of a site.

Reading the story

In Fig. 4 the date of the palace is known to us from coins and an inscribed slab attached to the palace-wall to be between A.D. 428-30. But we do not know whether the city-rampart was built by the builder of the palace itself or by his successor or predecessor.

The story revealed from the above stratification is this:—

Layer 8 is soft brown clay containing some potsherds etc., casually dropped by some passers-by; There is no sign of any occupation in this. Layer 7 has in its whole length so far excavated 11 hearths in groups of 3, 2, 1, 3, and 2 (marked as 'H' and a number of fragments of cooking-vessels, one pair to tongs, two fragments of a metal begging-bowl. But there are no signs of buildings, nor are there

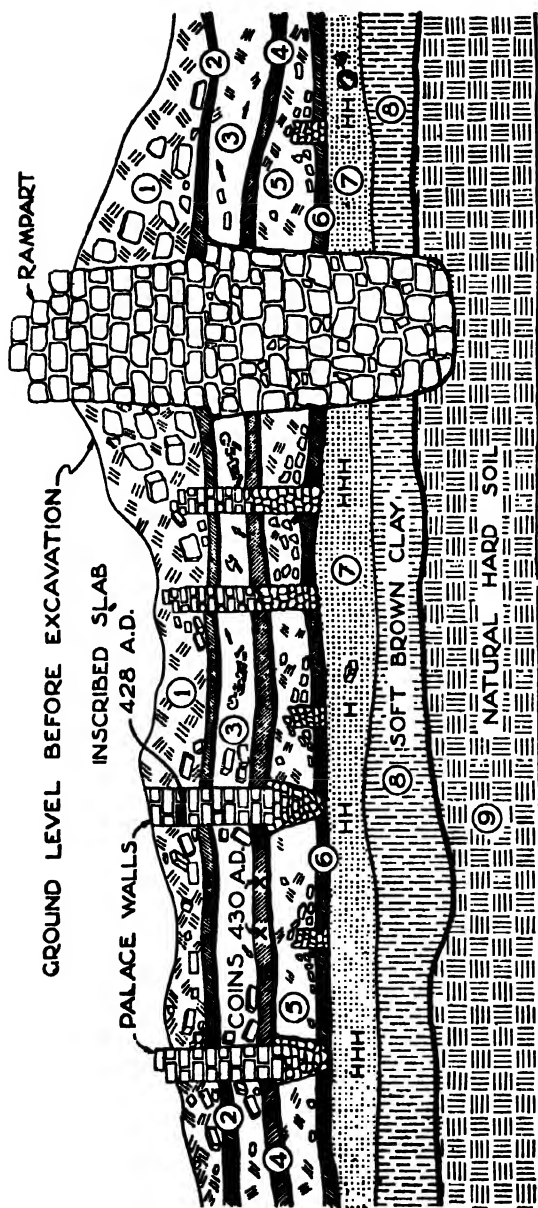


Fig. 4.—How story is gathered through stratification

any signs of post-holes indicative of timber-structures. The place was, therefore, at this time occasionally used by travellers and beggars who used to cook their food, pass the night here and then move on. There was no permanent habitation. Layer 6 is a black layer showing habitation. It runs to five stumps of walls. People started inhabiting the place, but the buildings were of ordinary stone-rubble and also did not have any foundation-trench. The obvious result was that the walls started giving way, and the débris is indicated by layer 5, which contains the same stones that were used for the walls.

But not long after came an improved phase of the city. The people rebuilt their houses, this time with *ashlar* masonry, and their chief man erected a huge building with thick walls carrying them down 4 feet below surface, reaching layer 6. An inscribed slab attached to one of the walls of the palace is dated A.D. 428, and the evidence is immediately corroborated by two coins, dated A.D. 430, found in the first occupation-layer running upto the palace walls.

Layer 3 represents a very important period in the history of the site. It had in the débris of the broken walls a number of arrow-heads, about a dozen spears, broken parts of a chariot, besides two skeletal remains. The skeletons had cuts of swords on them and were discovered in a dump. A cemetery discovered at a distance of 2 furlongs outside the city contains eight wounded skeletons, one of which has actually an arrow-head, exactly similar to those found in layer 3, still sticking to the left ribs. The cemetery contains pottery and beads exactly similar to those in layer 3. This confirms the fact that the city was actually invaded in this period and the inhabitants suffered much. It was, therefore, thought necessary that the king, in order to protect his people from further attacks, must construct a good defensive city-wall.

In the diagram, the rampart, 10 feet 8 inches wide, is made of huge blocks of stone ; though it goes 7 feet deeper than the palace walls, yet it belongs to a later phase of the palace. It was but necessary to have very deep foundation-trench for a city-wall, and the people cut through layers 3 to 8 and were satisfied only when they struck against very hard soil—the natural.

The first layer that runs upto the city-wall, and is, therefore, its contemporary, is the same which represents the occupation-layer belonging to the second phase of the palace. And we are, therefore, quite sure that the city-wall is later than the palace and may be dated as belonging to *circa* A.D. 500.

False reading of the story

Fig. 5 shows how facts can be falsified by taking into account only the horizontal place of an object as a basis for determining a stratum.

People residing in the house represented by wall A cut through layer 8 for the foundation of the wall. Layer 7 and 5 were the successive occupation-levels, layer 6 being the material used for raising the floor. Layer 4 represents the fall of the house. Layer 3, a deposit nearly 6 feet thick, consists of drifted earth and at places of bands of clay, indicating that water used to accumulate during rains. This characteristic deposit points to the fact that the site was abandoned for a pretty long period.

Then came the people who constructed wall B. As the surface of the ground was uneven, they dumped clay and other material—layer 2—to raise and level up the ground. The level inside the house is about a foot higher than on the outside, and rightly too. The wall has a drain that carried water from inside the house and discharged it in a soak-pit some 12 feet deep (cf. the figure). The soak-pit contains a number of full and broken pots thrown into

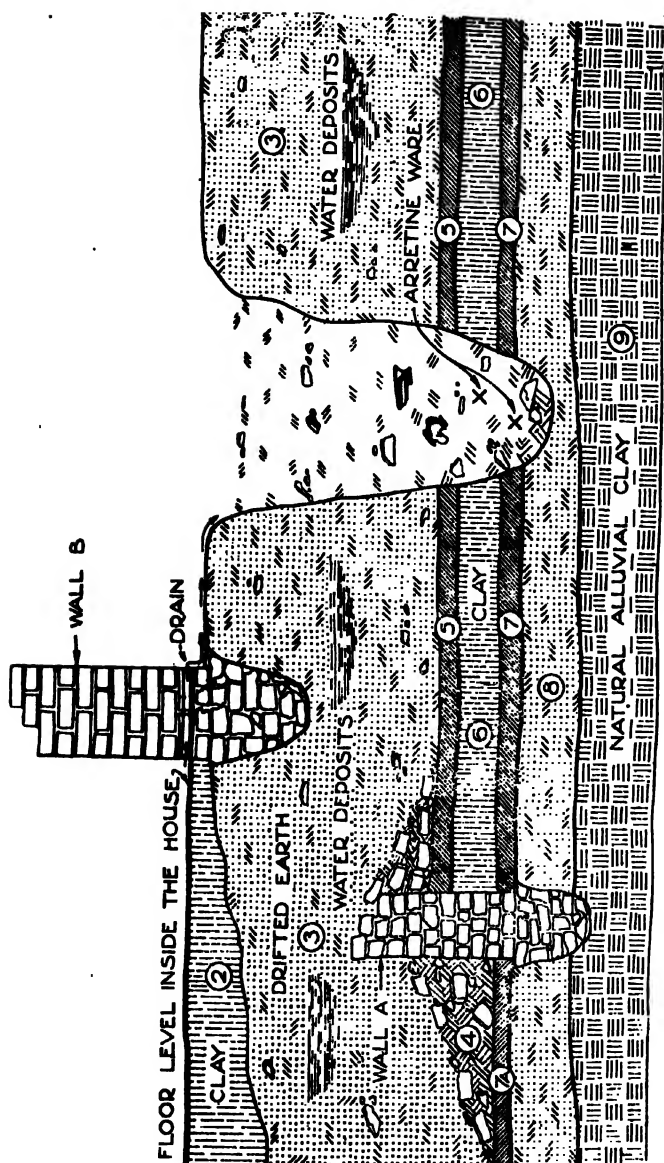


Fig. 1.—A soak-pit

it by the inmates of the house from time to time. Of these two are pieces of Roman pottery known as Arretine, which are accurately datable to 25 B.C. to A.D. 50.

Had the excavator not retained vertical sections and had only uncovered the walls, taking things on the horizontal planes as belonging to the houses on the same plane, these Arrentine wares, being exactly on the floor level of wall A, would have been recorded as belonging to it. And the date of wall A would have been the first century A.D.; whereas the truth is that wall A is definitely much earlier than the Arrentine ware—taking into account the thick deposit of 6 feet which accumulated slowly and gradually after the abandonment of the site by the authors of wall A. It is wall B and not A that belongs to the first century A.D.

The digging of a mud-site

But mere superimposition of one soil over the other is not always the criterion of its being later than the other. In fig. 6 we find that at places there are no stones or brick structures and it is the self-same earth used over and over again. In such cases we have to be very cautious in accepting the evidence.

The site under excavation was in constant habitation during Palaeolithic, Neolithic and Bronze Ages represented by different symbols in the diagram. Then came the Iron Age people who ousted the Bronze Age people and occupied the site. They thought of constructing a mud-rampart. To them it was doubly useful to dig all round the small settlements and to dump the same earth towards the interior making the dump high enough to be a defensive wall. And they did this.

The earth thus shifted contained tools, weapons and pottery from all the three previous Ages, and, therefore, the mud-rampart which was cut through during excavations

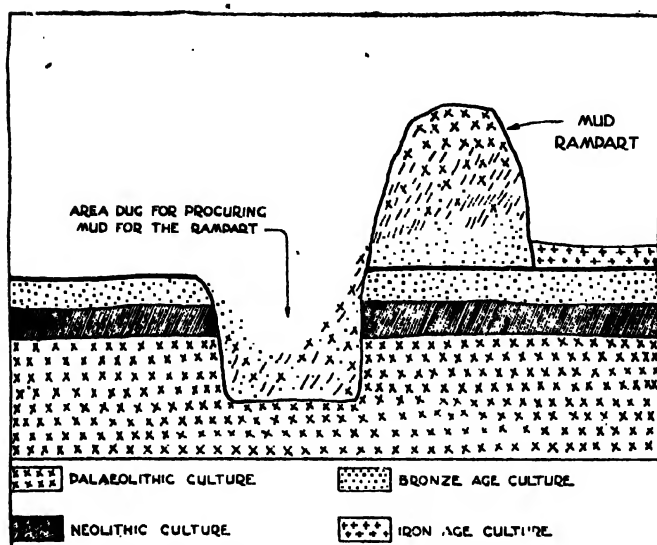


Fig. 6.—Section through a mud-rampart

represented Palaeolithic Age above Neolithic and Neolithic above Bronze Age—an order just the reverse of the actual. On the sides of the moat (resulting from the removal of the earth for the rampart) outside the rampart, all the three cultures lay higgledy-piggledy, been washed down the rampart itself by rains.

Thus we see that the excavator has to be very cautious, especially in cases where there are pits and mud-structures, or when the site has been churned up by brick-robbers.

Style and stratification

Of late scholars have shown a great fascination for stylistic basis in archaeological classification. And in many of our museums we find sculptures, beads, and especially terracottas classified solely according to style. But it must be borne in mind that the 'style' basis is always subjective. Whatever appears to one as crude and ugly may not appear

to be so to another. And furthermore crudeness is no criterion for a thing to be antique. For we find the manufacture of crude objects side by side with excellently made articles. Art, as we all see, starts with a crude form, gradually develops to its height and then again starts degenerating. It then becomes very difficult, sometimes almost impossible to distinguish the third stage from the first. And the natural result is that a man solely relying on stylistic basis is bound to commit blunders.

Stylistic classification has had its time. And it was, no doubt, useful once. But now is the time for us to put aside all subjectivity in the Science of Archaeology and adopt the more scientific method of Stratification.

True, this new method demands more supervisors, more time and more money than the older one (the ratio may be even three to one) but the results it gives are really more than a compensation for all that.

Future of archaeology in India

Moreover, the future may have still greater things in store for us. The war is now over, and our archaeologists will again have an easy contact with international science. Being relieved from carrying bombs, aeroplanes may be placed at the disposal of our archaeologists also, for use in exploration. A photograph from the air sometimes gives better information than observation on the ground. For the exploration of barren tracts, aeroplanes have immense possibilities. Mounds, ditches and soil-differences often come out more distinctly in aerial photographs than in ground-observation, and thus in a shorter time and perhaps at less cost wider areas can be explored.

Aerial photographs are specially useful in gathering the lay-out of a site now covered with crops, where patches and variations due to underlying streets assume a new significance when seen in relationship to one another from

a height. Growth of crops on the line of structures would naturally be less than on the rest of the area, and on areas where there were once wells and ditches crops would be more luxuriant. Then again difference in the colour of crops about the time of their ripening would also indicate much. Crops with structures underneath would ripen and turn yellow earlier and this difference clearly comes out in an aerial photograph.

In the West they have already started applying the method of pollen-analysis. People at the University of Cambridge are the pioneers in this respect. When analysed, pollen gives us the climatic conditions of the time and also an approximate idea of the antiquity of the soil and thus of the objects found therein. We hope that this new method may soon come to our country and that our University experts may give us a whole-hearted cooperation in this respect.

KAVI KAṆKAṆA*

By N. A. GORE

THE importance of Sanskrit Anthologies to a Historian of Sanskrit Literature cannot be overrated. Many are the poets who are known to us for the first time from citations in these anthologies. M. Krishnamachariar in his *History of Classical Sanskrit Literature*, (Madras, 1937) pp. 384-390^a records the names of about 80 anthologies. But about fifteen only of these are so far published.¹ As the information collected by M. Krishnamachariar is based on the published anthologies and the catalogues of Sanskrit Mss. only, naturally he could not give details of contents or extent about most of these. But it would be a very good thing, indeed, if a research institute were to undertake the publication of critical editions of the anthology-literature. Perhaps it may be found to be impracticable or inadvisable to publish each and every anthology irrespective of its intrinsic value. In that case, the preparation of analysis of the contents and the author, verse, and topics, indexes of all these anthologies individually, must be taken up in hand²; and then in the next place must be compiled cumulative indexes of these several indexes, on the pattern of the *Catalogus Catalogorum* of Aufrecht. They would be of immense value in tracing the sources or authors of stanzas which are often anonymously cited in works of Rhetorics and Commentaries,

*Paper read in the classical sanskrit section of the 13th session of the All India Oriental Conference held at Nagpur, in October 1946.

¹ For a list of these vide my Paper on "the Padyatarangī of Vrajanātha," *Poona Orientalist* XI. nos. 1-2 pp. 45 ff.

² I have so far prepared the Analyses and the Indexes of (1) the *Padyatarangī* of Vrajanātha, (Unpublished). Published in the *Poona Orientalist*, XI. 1-2. 45ff. (2) the *Sārasaṅgraha* of Maṇirāma, (Unpublished); and (3) the *Subhāṣitasarvasva* of Gopinātha, (also Unpublished).

and in preparing a literary history of each poet and fixing his date.

An attempt is made in this paper to put together whatever information is available about a poet named Kaṅkaṇa, who is first known to us from quotations of his verses in two Anthologies. In the *Saduktikar pāmṛta* of Śrīdharadāsa, compiled in 1205 A.D., two stanzas of Kaṅkaṇa are given.³ In the *Subhāṣitāvalī* of Vallabhadeva, probably belonging to the 15th c. A.D., another stanza of Kaṅkaṇa is quoted.⁴ Nine stanzas of Kavi Kaṅkaṇa are found cited in the *Rasa-ratnapradīpikā*⁵ of Allarāja, a work of Rhetorics composed in the 14th c. A.D.⁶ One stanza of Kavi-Kaṅkaṇa, describ-

³ (i) रे रेवातदकेलिलम्पटवपुः शोकं वृथा मा कृथाः
कुम्भिन् कुम्भसमाहृतं पिव पयो बन्धय बन्धयस्मृतिः ।
साभिः काननकुञ्जरीभिरभितो बन्धेन दुरीकृतो
बेलत्पल्लवशस्लकीवनलता कुञ्जेषु ते विभ्रमः ॥ Sk. 4.4.3.1.

(ii) बीजावधानलयोल्लासि लोलबंगुलिपल्लवः ।
भारत्याः पातु भूतानि पाणिर्लसितकङ्कणः ॥ Sk. 1.71.1

⁴ (iii) कष्टग्रहे क्षिप्रिलतां गमिते कथञ्चिद्
यो मन्यते मरणमेव सुखाम्भुपायम् ।
गच्छन् स एव न बलाद्विषृतो युवाभ्या-
मित्युज्जिह्वते भुजलते बल्यैरिचास्याः ॥ Sk. No. 1085.

⁵ Edited by Dr. R. N. Dandekar, *Bharatiya Vidyā Series* No. 8., Bombay 1945. "His (Kaṅkaṇa's) works *Mrgāṅkaśataka* and *Mano-valambikā* are known from DC. XX 8008."—Appendix I of RRP. But the *Mano-valambikā* is not mentioned at DC. XX. 8008; and it is a Kāvya about Caitanya doctrine by Mukundadāsa acc. to CC. 1. 429 and not by Kaṅkaṇa !

⁶ (i) अशक्तवर्णानि मनोहराणि निरर्थकानि क्षणविस्मृतानि ।
श्रुवं शिशूनामसमञ्जसानि वचांसि हासं जनयन्ति पुंसाम् ॥

RRP. 2. 13 as an instance of हास.

(ii) आकर्ष्यं सङ्गरमहारणं वचेष्टितानि गोष्ठीरसाहृतजनस्य मनोविकारः ।
अङ्गे करोति पुलकं नयने विकाशं कान्तिं च कामपि मुखे स्फुरणं च बाह्वोः ।

RRP 2. 109 as an instance of उत्साह.

(iii) आकर्ष्यं गर्जितं घोरं जलदानां समागमे
बाला विभूतलज्जेव सत्रासं क्षिप्यति त्रियम् ॥ RRP. 4. 62 as an instance of त्रास.

ing the season Hemanta is quoted in the *Padyaracanā*⁷ of Lakṣmaṇabhaṭṭa Āṅkolkar (1650-1675 A.D.). One more stanza of Kanāka Kavi is quoted in the *Kavikaustubha*

- (iv) नायस्तासि महीभृता सुरतरोः काण्डेन नोत्पीडिता
नैवोच्चैःश्वसः खुरेण कलिता नो वा विषेणादिता ।
पायाद्विषमिदं हरिः कुतुकिनीं लज्जावनमनानां
लक्ष्मीमङ्गुतां विधाय मधुरं कर्णोपकण्ठे बबन् ॥ RRP. 5. 19
to illustrate प्रथमतमागमे बालाचित्तार्जनम् ।
- (v) अकरोत्तुणमिव जीवं पूर्वं जीमूतबाहनः कृपया ।
तुणमपि जीवं कुरुते लोकः सत्वात्परिभ्रष्टः ॥ RRP. 5. 59 to illus-
trate दयावीर, a variety of बीररस.
- (vi) लीलापङ्कजमावधाति रचिरे गम्भीरनाभ्यन्तरे
कस्तुरिद्वयचचितं वपुरपि श्यामीकरोत्यावरात् ।
ताटकं च करे करोति कुतुकाञ्चकानुकारं तथा
लक्ष्मीः कीदृति पीतवस्त्रकलिता स्मित्वा सलीनां पुरः ॥ RRP. 6. 4
as an instance of लीला.
- (vii) हित्वा नमंकषां सलीविरचितां क्षिप्त्वा दृशं व्यायता-
मेषाक्षया सहसा विलुण्ठनपदं किञ्चित्तुरः सारितम् ।
उत्थायेक्षणपल्लवेन शनकैर्मां च स्पृशन्त्या तथा
किञ्चिद्विभ्रतदेहभङ्गसुभगं तन्व्या ममाग्रे स्थितम् ॥ RRP 6. 7 as an
instance of विलास.
- (viii) माल्यं स्कन्धविलम्बितं च निहितं केशे दृगोरञ्जनं
स्फूलप्रान्तं विनिमित्तं च हृदये हारस्तु तिर्यग्भूतः ।
कूर्पासस्य च बीटिकागुलिमुखैर्नायोजिता यद्यपि
प्रायोऽस्यास्तदपि स्फुरत्यभिनवा शोभैव लोकोत्तरा ॥ RRP. 6. 9. as
an instance of बिच्छित्ति.
- (ix) आकुञ्चयाद्यं नलविलिलने पश्यति भूविभङ्गया
गाढादलेखे वदति च ह हा मुञ्च मुञ्चेति वाचम् ।
केशाकृष्टावरुणनयना ताडने साधुनेत्रा
नानाभावं धयति तदणी नाटके मन्मथस्य ॥ RRP 6. 17. as an ins-
tance of कुट्टमितम्.

⁷ Published by the Nirṇaya Sāgara Press, Bombay, 1908. The stanza is लज्जा प्रौढमृगीदृगामिव नवस्त्रीणां रतेच्छा इव

स्वैरिष्या नियमा इव स्मितरवः कुल्याङ्गनानामिव ।

दम्पत्योः कलहा इव प्रणयिता वाराङ्गनानामिव

प्राबुर्भूय तिरोभवन्ति सहसा हंमन्तिका वासराः ॥ पद्यरचना १२.१३.

For the date of the *Padyaracanā*, vide Prof. P. K. Gode's paper "The date of the *Padyaracanā* of Lakṣmaṇabhaṭṭa Āṅkolkar Between A.D. 1625 and 1650" *Jou of Ori. Res.*, Madras, Vol. 14 (1941).

(1675—1700 A.D.) of Raghunātha Manohara,⁸ which is being edited by the writer of the present paper for the *Bhāratīya Vidyā Bhavana*, Bombay. In his Introduction (p. 14) to the *Subhāṣitāvali*, Dr. Peterson notes that a stanza of Kavi Kaṅkaṇa is quoted in Rājānaka Ratnakaṇṭha's *Sārasamuccaya*,⁹ a compilation of the *Commentaries* on the *Kāvya-prakāśa* of Mammaṭa. If M. Krishnamachariar's information is correct, Ratnakaṇṭha belonged to the 17th c. A.D. Thus we find that Kaṅkaṇa's verses are quoted from the first decade of the 13th c. A.D. to the last quarter of the 17th c. A.D. and as such we may tentatively fix 1150 A.D. as the lower limit of Kavi Kaṅkaṇa. If Peterson's suggestion¹⁰ that Kaṅkaṇa may be identical with Kaṅkaṇavarṣa mentioned in the *Rājataranginī* (1149-1150 A.D.) is supported by indubitable evidence, Kaṅkaṇa may have to be assigned to a much earlier period.

It should be noted that the name of Kaṅkaṇa occurs in three different forms: Kaṅkaṇa,¹¹ Kavi Kaṅkaṇa¹² and Kaṅkaṇa Kavi.¹³ Unless evidence to the contrary is forthcoming it may be presumed that these three forms are but the variations of the name of one and the same person. As for Kaṅkaṇa being the same as Kaṅkaṇavarṣa, no more

⁸ कङ्कणकवेर्भावपञ्चाशिकायाम्—

सिन्धुसुनुपतेमित्रं तस्यायुषपतिद्वयः ।

तस्य कन्यासखीस्वच्छं भाति ते कीर्तिसङ्घलम् ॥ *Kavikaustubha* as an instance of स्वसङ्केतप्रकल्पार्थबोध.

⁹ लीलापङ्कजमादधाति etc. See note 6 (vi) above.

¹⁰ "He [i.e. Kaṅkaṇa] may be the Kaṅkaṇavarṣa from whom the city Kaṅkaṇa took its name. भर्तुः कङ्कणवर्षस्य पुण्योत्कर्षाभिवृद्धये ।

चकार कङ्कणपुरं रमणी स्वर्णवर्षिणी ॥

Rajat. VI. 301." p. 14 Intro. to *Subhāṣitāvali*.

¹¹ In the *Subhāṣitāvali*, the *Saduktikarṇāmrta*, and C.C. II. 15 as the author of the मृगाङ्कशतक.

¹² In the RRP; as the author of the मृगाङ्कशतक and the काव्य-लहरीस्तव.

¹³ In the *Kavi-Kaustubha*.

information is available than the surmise of Peterson, referred to above.

As for the works of Kavi Kaṅkaṇa, we have to note that the *Kavi-Kaustubha* mentions *Bhāvapañcāśikā* as the work of Kaṅkaṇa Kavi. We do not know the names of works from which verses are cited in the *Subhāṣitāvali*, the *Saduktikarṇāmṛta*, the *Sārasamuccaya* and the *Rasaratnapradīpikā*. Though the *Catalogus Catalogorum* records no Ms. of the *Bhāvapañcāśikā* of Kaṅkaṇa, the existence of two short works of Kaṅkaṇa is attested to by Mss. recorded in the *Catalogus Catalogorum viz.*, the *Mrgāṅkasatakakāvya*¹⁴ and the *Kārunyalaharī-stava*.¹⁵

According to the *Descriptive Catalogue of Mss.* in the *Government Oriental Library*, Madras, Vol. 20, p. 8008, the *Mrgāṅkasataka-Kāvya* is "a short poem in praise of the moon who is considered to inspire sentiment of love into the hearts of people." But the few stanzas quoted in the *Descriptive Catalogues of Mss.* in Madras, Tanjore, Kashmir and at the India Office, London, are all in praise of, or refer to the dark spot on the moon fancied as the deer (*mrgāṅka*) and not to the moon in general. The *Kārunyalaharī-stava* is also a short poem in about a hundred stanzas. It is preserved in a single Ms. described in the Vol. X (No. 4025) of the *Notices of Sanskrit Mss.* by Haraprasad Shastri. From the few stanzas quoted therein, this work appears to be in praise of some particular form of goddess Pārvati, for the references to the deity in the vocative case point

¹⁴ The Mss. of the मृगाङ्कशतक—(i) Govt. Or. Libr. Madras 71. [= *Des. Cat. of Mss.* in the Govt. Oriental Library, Madras, Vol. XX. p. 8008], (ii) Stein 71 [This Ms. is dated-Vikrama Samvata 1941 = 1884 A.D.]—CC. II (iii) IO. 2538 No. 3942 [this Ms. is dated-1781 A.D.]—CC. III; (iii) 100. (iv) *Des. Cat. of Sk. Mss.* in the TMSM Library, Tanjore, Vol. VII. No. 3962.

¹⁵ The Ms. of the कारुण्यलहरीस्तव—(i) L 4025—CC. II. 19 [= *Notices of Sk. Mss.* by Haraprasad Shastri, Calcutta 1892, Vol. X No. 4025].

out to a goddess (cf. शिवे and अपारव्याहारे) and the colophon also clearly shows that the poet was a devotee of goddess Pārvatī (cf. शङ्करीचरणकिङ्करीभवता कविकङ्कणेन कृतः काव्यलहरीस्तवः). The reference to the subject matter of the work in the *Notices of Sanskrit Mss.*, Vol. X shows it to be a description of the form, qualities, greatness, etc. of the Bhagavatī in the form of a hymn (विषयः—स्तोत्रव्याजेन भगवत्याः रूपगुणमाहात्म्यादिवर्णनम् ।) But in contradiction to this, in English it is said that the work is “a hymn to Dakṣiṇāmūrti” (i.e., a form of god Śiva): But for an accurate and detailed information about the contents of these two works we must wait until the manuscripts are actually examined. An estimate of Kavi Kaṅkaṇa as a poet also must be deferred till we study these works. But meanwhile I add here an index of the stanzas ascribed to Kavi Kaṅkaṇa and those quoted from the two works of his in the *Descriptive Catalogues of Mss.*, for ready reference.

Index of the first quarters of the stanzas of Kavi Kaṅkaṇa known from the Descriptive Catalogues and Printed works.

1. अकरोत्पुणमिव जीवं	RRP. V. 59.
2. अङ्गे कलङ्कवन्मात्	MS. 5.
3. अपारव्याहारे तव दक्षिरकाव्यलहरीं	KLS. 100.
4. अव्यक्तवर्णानि मनोहराणि	RRP. II. 13.
5. आकर्ष्यं गजितं घोरं	RRP. IV 62.
6. आकर्ष्यं सङ्गरमहार्णवचेष्टितानि	RRP. II. 19.
7. आकुञ्च्यार्धं नक्षत्रिलिखने पश्यति धूविमङ्गला	RRP. VI 17.
8. इति कविकङ्कणभणितं	MS. 101.
9. इति शतकमनन्तब्रह्मविद्यास्तवस्य	KLS. 101.
10. जीवधिपतिरङ्कुमिवात्	MS. 7.
11. कण्ठग्रहे शिथिलां गमिते कणञ्चित्	Sbv. 1085.
12. जेतुं त्रिभुवनमखिलं	MS. 1.
13. तदव्याद्वन्द्व्या विमलकलधौतद्युति महः	KLS. 1.
14. तुहिन कलङ्क केशव	MS. 99.

15. नायस्तासि महीभृता सुरतरोः काण्डेन RRP. V. 19.
नोत्पीडिता
16. माल्यं स्कन्धविलम्बितं च निहितं केशे RRP. VI 9.
दुशोरञ्जनं
17. रजनीशरजतभाजनं MS. 3.
18. रे रेवातटकेलिलम्पटवपुः शोकं वृथा मा Sk. IV. 43.1 p. 255.
कृथाः
19. लज्जा प्रौढमृगीवृशामिष नवस्त्रीणां Padyaracanā p. 79.
रतेच्छा इव
20. लीलापङ्कजमावधाति रुचिरे गम्भीर- RRP. VI. 4;
नाम्यन्तरे Sārasamuccaya.
21. विधु वधितण्डुलपिण्डं MS. 100.
22. बीजाकषाणलयोल्लासिलोलंबंगुलिपल्लवः SK. I. 71. 1. p. 51.
23. शशिनि सुषामयसिन्धौ MS. 2.
24. शशिसम्पुटे कलञ्जे MS. 6.
25. शिवे तत्तन्नानागम वैषम्यकलहां KLS. 2.
26. सिन्धुस्रुपतेमित्रं Kavikaustubha, 100.
27. हरदग्ध एव मदनः MS. 4.
28. हित्वा नर्मकथां सखीविरचितां क्षिप्त्वा RRP. VI. 7.
दुष्टं व्यायतां

EARLIEST DATE OF KĀLIDĀSA FROM IRANICAN SOURCES

By M. V. KEBE.

ARDESIR I, the Founder of the Sassanian dynasty reigned in Iran from 211-221 A.D.¹ On his accession the Southern Western dialect of Palilavi, commonly known as Pārasīka, began to be employed on coins, seals and lapidary inscriptions.²

Kālidāsa, in the conquest of Raghu, in the *Raghuvaṃśa*, mentions his having started on an invasion of Pārasīka. The expression is unique in Sanskrit. Kālidāsa must have come across it on one of the coins of Iran circulated in this country. Therefore, his earliest date cannot be earlier than 211 A.D.

In a paper³ yet to be published, I have fixed his date in the Gupta Period. I held him to be a contemporary of Skand Gupta Vikramāditya.⁴ In the same paper, I had carried his reign to the 1st century B.C. But this piece of evidence is against that theory. This requires further investigation.

¹ *The Historian's History of the World.*, Vol. VIII.

² Reading and Translation of Palilavi by Dr. J. M. Unvalc, in a paper submitted to the 13th *All-India Oriental Conference*, Nagpur, 1946.

³ Further Light on the date of Kālidāsa to be published in *Dr. S. Commemoration Volume*, Lahore.

⁴ "Who was the Founder of the Vikrama Era"; *The Journal of the Ganganatha Jha Institute*, Vol. I. Part 4, pages 417-423, 1944.

Proceedings of the Annual General Meeting of the General Council.

THE Annual General meeting of the General Council of *the Ganganatha Jha Research Institute* took place at 5 p.m., on Thursday February 20, 1947 in the Balrampur Hall (Hindu Boarding House).

In the unavoidable absence of the Rt. Hon. Sir Tej Bahadur Sapru the president, Mahamahopadhyaya Pandit Umesh Mishra proposed Prof. R. D. Ranade to take the chair. Being duly seconded Prof. Ranade occupied the chair and declared the meeting open.

The minutes of the last meeting held on February 15, 1946, were read by the Secretary and confirmed.

Thereafter, at the proposal of the Chairman a resolution of condolence on the sad demise of two of our revered members—Pandit Madan Mohan Malaviya and Dewan Bahadur Dr. S. K. Aiyangar was adopted unanimously, the members standing.

After this, the Secretary Mahamahopadhyaya Pandit Umesh Mishra presented the following annual report for the year 1946-47 :—

(Secretary's Report printed at the end).

It was proposed and seconded that the report be adopted and the motion was unanimously carried.

On behalf of the treasurer, the Secretary presented the estimated budgets for the next year together with the audit report (printed at the end).

The report was adopted after being duly proposed and seconded and the Secretary was (2) asked to convey thanks to the Accountant General and Babu Dharmakishore and his assistants for the kindness they have shown in auditing

the accounts of the Institute. The next item on the agenda was the appointment of an auditor for the next year.

The Secretary said : According to the rules we have to appoint an auditor for the year 1947-48. Last year we requested the Accountant General to get our accounts audited and he kindly acceded to our request and the accounts were audited accordingly. It was resolved that the same arrangements should be made for the next year also.

Thereupon, the Chairman requested Dr. Gorakh Prasad, D.Sc. F.R.A.S., of the Allahabad University to deliver his lecture on the Astronomy of *Vedānga Jyotiḥ* the full text of which is published in the next issue.

Prof. Ranade in his concluding remarks said "I am very sorry to listen to this sorry tale presented by the Secretary in his report regarding the grants for the construction of the building and further improvement of the Institute. I think that those who are entrusted with the higher authority or have an opportunity to get to close quarters with Government or connected with the managing committee should try their level best to get money for the institute. It does not seem well to start an institute and we should leave the thing half finished or almost unfinished.

As regards the lecturer I wanted to thank him but he had to go away on account of engagement elsewhere. I was very glad to listen to the points which he put before us and in regard to one or two points that he mentioned, I was reminded of a passage in *R̥g-Veda* which was earlier than the *Vedānga Jyotiḥ* where reference is given to the 13th month. In the *Vedānga Jyotiḥ* we have not got a perfect record and that fact should give us the hint to pursue further in this line.

Dr. Gorakh Prasad told us that the Mohamedans cared only for the lunar months and the Europeans for the Solar months and that we Hindus have propounded a system

based on solar and lunar months. It shows the spirit of Hinduism. It shows the synthetic character of our philosophy and religion. Islam and Christianity are not outside us. We absorbed them; we synthesised them. Jinnah has lectured in this hall and there is the picture of a Christian Governor in this hall. Our Hinduism is so tolerant as to incorporate all and Mr. Jinnah is one symbol of this great Brotherhood. I wish every one of us should try his level best to get funds for the institute and make it a faithful accomplice as early as possible."

With these brief remarks, the Chairman declared the meeting closed.

Special General Meeting.

Just after the annual general meeting, a special general meeting of the General Council of *the Ganganatha Jha Research Institute* was held in the same hall with Prof. Ranade in the Chair.

This meeting was convened to consider the proposal of raising the subscription of the ordinary membership from Rs. 10 to Rs. 12 due to the increased rates of printing charges and to amend the Bye-law accordingly.

	Old rates	Present rates
	Rs as. p.	Rs. as. p.
Composing per page	3 0 0	4 12 0
Printing per form.	5 0 0	8 0 0
Folding including stitching.		
per form.	2 0 0	3 0 0
Cover Printing.	4 0 0	6 8 0
Cover Composing.	2 0 0	3 0 0

The secretary explained the present position with regard to printing charges in the Indian Press which has been printing the institute's journal. He pointed out the disparity between the old and the present rates.

This is the position and therefore the meeting has been called to consider whether we can raise the subscription from Rs. 10 to Rs. 12 for ordinary membership.

Pandit K. Chattopadhyaya said : " I support the proposal made by the Secretary for the raising of the subscription whether we take into consideration the present enhanced rates of the Indian Press or not the question remains that the standard of expenditure is going up everywhere. We have now to spend more on everything. These rates that were fixed were based on economic standards of the pre-war period. Now in the post war period, we have to spend more money for everything. The whole political economy of the world has changed altogether. This proposal made by the Secretary is a more modest one viz., that we raise the subscription from Rs. 10 to Rs. 12 for ordinary Membership.

One thing, however, I would suggest that in future all such cases of changes in our rules should come before the general body through the Executive. "Today the Secretary wanted to place it before the Executive, but there was no time. It should be our general policy to have these things through the Executive." The proposal was carried unanimously and the subscription for Ordinary Membership from 1947 was fixed at Rs. 12 per year.

The proposal to fix subscription for Membership for foreign countries was left to the Executive Committee to decide. Thereupon, while proposing a vote of thanks to the chair, Dr. Ishwari Prasad said, " I should like to propose a vote of thanks to the Chairman. In his remarks he has made an appeal for Collection of funds for the Institute. If this Institute has to work I think the members ought to act vigorously. Little has been done since the Institute was founded and in this respect the members of the University staff and other gentlemen who are members of this body should exert themselves vigorously. I should suggest

that a committee should be appointed now which will make efforts to collect money among its influential citizens; they might also call upon the Government. Those who have influence in the public may go about and ask rich and influential people to contribute liberally to the institute. In any case something has to be done very vigorously in order to collect money for the Institute, so that the work should be carried on satisfactorily. It is for the meeting to decide."

It was decided that the suggestion of Dr. Iswari Prasad may be sent to the Executive Committee for taking necessary action.

Pandit K. Chattopadhyaya while supporting Dr. Iswari Prasad, said "this might be included in the minutes of the previous proceedings of the general meeting."

There being no more business, the Secretary, while proposing a vote of thanks to the members said, I thank you all who have taken the trouble to form the quorum and conduct the meeting. Before we disperse it is my solemn duty to thank the authorities of the Hindu Boarding House who have been so kind to allow us to occupy at least one of their halls (where they could have easily allotted 12 students) for the use of our library. We are exceedingly sorry we have not been able to shift from this place and vacate the Hall so long. We hope that they will kindly allow us to remain here till we have got our own building. I once more thank you all.

Annual Report of the Ganganatha Jha Research Institute, Allahabad.

THE activities of the Institute during the year 1946 have not been very encouraging. The Sub-Committee, appointed by the Executive Committee to draw up plans and prepare estimates for the buildings of the Institute and of the list of equipment, met on February 6, 1946 and approved of the scheme and the estimates drawn up under the supervision of Mr. D. H. R. Rao, B.E., A.M.I.E., Engineer of the Allahabad University. This was subsequently sent on to Government. The Secretary, Education Department of the U. P. Government, returned the plans and the estimates with a request to re-submit them having got them confirmed by a competent engineer, through the Director of Public Instruction along with the estimates of the furniture and other equipment based on the quotations of reliable firms.

Accordingly, the plans confirmed by the Municipal Engineer, Allahabad, and the estimates based on the quotations taken from Messrs Godrej and Boyce Ltd., Bombay for steel furniture, the Allahabad Christian Workshop for wood work, and the Allahabad Universal Engineering Co., Ltd., for electric furniture and for the buildings from the Allahabad University Engineer, altogether amounting to Rs. 2,58,298-9-0 were again sent to the Government through the Director of Public Instruction on September 19, 1946.

The Government returned all these through the D. P. I. (Vide their letters G. O. No. A-7073,—XV—173-45, dated Dec. 18, 1946 ; No. (F.(1)-10177-II-27(18), dated Allahabad January 3, 1947) with the remark that "the Governor regrets that it is not possible to sanction any grant to the Institute."

Again, as usual the Secretary of the Institute sent to the Government the Annual Estimated Budget through the D. P. I. for a recurring grant-in-aid to the Institute on September 26, 1946. The D. P. I. further asked the Institute to submit a budget for a deficit grant from July 1946 to March 1947 (Vide his letter No. F. (1)/18030-II-27 (18), dated Allahabad, December 18, 1946).

Just after this the Secretary of the Institute had an opportunity to represent personally these matters to the Hon'ble Minister of Education, U.P. Government and explain to him the urgent need of having a building for the Institute and also of having a suitable grant from the U. P. Government which may enable the Institute to get grant from other Provincial Governments. The Hon'ble Minister gave a patient hearing and took from the Secretary a copy of the estimates and also an account of the grants which the Bombay Government gives to the Bhandarkar Oriental Research Institute, Poona. (I may be permitted to mention here an account of the grants of which the Bhandarkar Oriental Research Institute, Poona gets from the Bombay Government from the Report of the Institute for 1931-32 ; (1) Bombay Government grants Rs. 27,500-0-0, (2) Grants from other sources Rs. 12,321-0-0, (3) Grants from States and Universities.... Besides, the Bombay Government, have placed at the disposal of the Bhandarkar Institute the entire publication of the Bombay Sanskrit Series from which the Institute gets a fairly good income). But to our great disappointment the Education Secretary to the U.P. Government has sent the following reply (Vide his letter D.O. No. A 7907/XV/173-45, dated Lucknow, February 6, 1947)—“In this connection I am desirous to inform you that Government regret that it is not possible to help the Institute in moving into a bigger building by sanctioning any grant at present.”

As regards the grant of lease of the plot of land in the local Alfred Park for the construction of the buildings of the Institute, I am glad to inform the Council that the Government have formerly transferred it to the Institute and that the lease has been registered only today, on February 20, 1947.

NEED OF HAVING A BUILDING

We strongly feel that without having a building for the Institute, it is not possible for the activities of the Institute to be expanded. The Hall which the authorities of the Hindu Boarding House have kindly placed at our disposal is now packed with printed books, manuscripts and journals. There are 20 Almirahs which leave very little space for the Pandit and the Research scholar to work. Again, according to a clause of the lease it is necessary to get the building constructed within three years. Moreover, it seems that unless the correction of the buildings is now taken up, it is difficult to get any good donations.

MEMBERSHIP

The total number of Ordinary Members on the 31st of December, 1946 was 85 against 61 last year. Twenty-four new members have been enrolled in course of the year. Three of the Ordinary members have compounded for Life-membership. Thus with 77 Life-members, 20 Donors, 2 Ex-officio and 2 nominated members, 9 Honorary Members and 85 Ordinary Members the total number of the members of the Institute at present is 194 against 164 of the last year. I am sorry to mention the sad demise of our revered Pandit Madan Mohan Malviya, who had inaugurated the Institute and Dewan Bahadur Dr. S. K. Aiyanger one of our Honorary members.

MEETINGS

There were three meetings of the Executive Committee. The Finance and Research Committee each met twice.

PUBLICATIONS

During the period under review Vol. III, Parts 2, 3 and 4 and Vol. IV. Part 1 of the Quarterly Research Journal of the Institute consisting of about 500 pages and 2 plates have been published. The Board of Editors have had a very difficult time. Strike after strike in the Press and disturbances in the city put serious obstacles in our way. It is, however, a matter of great satisfaction that even then we are only three months late, while we find that several research journals of the country have been either temporarily discontinued or are running several months late.

We took up the publication of the Sanskrit Records in possession of the Imperial Records Department, Government of India, last April. The Sanskrit portion along with a long historical Introduction has been printed. The notes are to be printed now. In all the book will consist of about 300 pages. The cost of the printing of this book will be met from the donations which His Highness the Maharaja of Tehri-Garhwal has kindly promised for the purpose.

LIBRARY

Most of the books received for review in the Journal have been placed in the Institute Library. The Government of Baroda has presented three volumes, while two volumes have been presented by the Government Press, Allahabad. Besides, we have also purchased 6 volumes specially for the work of the research scholar.

In the Manuscript Section no fresh addition has been made this year. I am glad to announce that all the manuscripts present in the Library have been now classified and 700 manuscripts have been so far catalogued. Card-board has been put on both the sides of each of the manuscripts. We have not, however, been able to get sufficient cloth for binding each of the manuscripts so far.

The Institute has got on its exchange list 47 Research Journals and Magazines, of which five are foreign. Efforts are being made to make the sets complete by getting the back numbers of the Journals either free of cost or at cost price. Through the kindness of some of the Editors we have been able to complete the sets of a few journals.

CONFERENCE

The Institute was invited to send delegates to the 13th All-India Oriental Conference held under the auspices of the Nagpur University in October last. Pandit K. Chattopadhyaya and the Secretary were sent as delegates of the Institute and the Institute was enlisted as a member of the Conference by paying the Conference Fee. The Research Scholar also accompanied us to the Conference where he also read a paper.

RESEARCH SCHOLARSHIP

The U.P. Government were kind enough to give us a non-recurring grant of Rs. 3000 last year which enabled us to award a research scholarship of the value of Rupees 100 per month from July 1946 in Indian Philosophy. The scholarship was awarded to Mr. A. S. Nataraja Ayyar, M.A., LL.M., an Advocate of the Madras High Court, to work on *the Mīmāṃsā Rules of Interpretation*. The scholar has been working from July 1946 and has collected enough material on the subject and has been able to write out the first chapter of his book.

SPECIAL LECTURES

We have been very keen to organise special lectures on topics of public interest through scholars of reputation. This year we could have only two lectures : one on the Date of the Kuru-war and the other on the relation of the *Bhagavadgītā* to the *R̥gveda* by Professor V.B. Athavale, M.Sc., F.R.G.S., H.P.T. College, Nasik. These lectures provoked a good deal of discussion amongst scholars and several papers have been written on these two important topics. Due to the disturbed conditions of the city it could not be possible to arrange for more lectures.

PLAN FOR FUTURE ACTIVITIES

I may also add here that the Executive Committee has appointed a sub-committee to draw up a scheme for publishing an authoritative History of Sanskrit Literature including all its branches with the kind co-operation of experts. We hope the scheme will soon be placed before the Executive Committee for its approval. Besides, we are trying to collect unpublished rare and important manuscripts of Sanskrit texts for publishing. Correspondence is going on with persons who are expected to meet the cost of such publications. Besides, we want to award more Research Scholarships for higher studies.

APPEAL FOR FUNDS

This is in brief the report of our activities. The Secretary feels it necessary to point out that we could not collect any fresh funds this year for the Institute. Those whose influence has been the chief source of its income, namely, the President, the Rt. Hon. Dr. Sir Tej Bahadur Sapru who has been all along seriously ill, and Dr. Amaranatha Jha, the Vice-President, who has been out of India almost throughout the whole of year, could not find any opportunity to exert their influence.

We do not expect any grant for the buildings from the U.P. Government at least in the near future. Our President and the Vice-Presidents are so much occupied with more important and bigger problems of the country that they do not get much opportunity to do as much service to the Institute as they desire. No doubt, they will never miss any opportunity to help the growth of the Institute, but we should remember that it is also the duty of every one of us to do our best to expand the Institute by finding out means to collect funds for having a suitable building for it and making it a fully equipped institution with up-to-date publications, collection of manuscripts and award of more research scholarships.

Lastly, the Secretary takes this opportunity of expressing his sense of gratitude to those who have helped the Institute with generous donations, contribution of articles and presents of books for review. It is hoped with the kind co-operation of the members and public we shall be able to give a better account of our activities when we meet next.

Copy of the Audit Report of the Ganganatha Jha Research Institute,
Allahabad for the year 1945-46 (ending 31st March, 1946).

INCOME

Details	Up to 31-3-45	From 1st April 1945 to 31st March 46	Total
Donations A/C including Govt. grant	1,20,544-8-10	4953-0-0	1,25,497-8-10
Life-Membership A/C	3,169-0-0	449-4-0	3,618-4-0
Annual Membership A/C	1,091-2-0	479-14-0	1,571-0-0
Benefactors A/C	1,750-0-0	0-0-0	1,750-0-0
Interest A/C	0-0-0	9722-9-8	9,722-9-8
Mr. Mishra's A/C		99-14-0	99-14-0
TOTAL	1,26,554-10-10	15,704-9-8	1,42,259-4-6

	EXPENDITURE		
General Expenses	1,834-01-07	594-02-10	2,428-04-05
Postage A/C	45-08-00	22-00-03	67-08-03
Quarterly Journal A/C	3,159-12-03	2,537-9-09	5,697-06-00
Surplus	1,21,515-5-00	12,550-12-10	1,34,066-1-10
TOTAL	1,26,554-10-10	15,704-9-8	1,42,259-4-6

Surplus income	Almirahs and	
Over Expenditure 1,34,066-1-10	Shelve A/C	284-0-0
	Securities A/C	1,28,610-8-7
	Cash at Bank	5,170-7-3
	Suspense A/C	1-2-0

(Sd.) Dharmakishore,
Asst. Accountant, Allahabad,
Honorary Auditor.

REVIEWS OF BOOKS

RISE OF THE SIKH POWER. By N. K. Sinha, published by the University of Calcutta ; pp. 174, Price Rs. 5. 1946.

Dr. Sinha is not new to the students of Indian History. He has contributed several volumes to and is a well known worker in the field of Modern Indian History. The book is divided into eight chapters and light has been thrown on the rise of the Sikhs during the years of decline of the Mughals. During the period of confusion that followed, the two rising powers were Marhattas and the Sikhs but none of the two showed any farsightedness and did not realise the vital need of the hour viz., unity amongst themselves. The Marhattas failed to grasp the realities of the situation and the Sikhs held the view that the Marhattas were intruders.

After the battle of Panipat the Marhattas receded into the background for a while and the Sikhs gained more and more strength. Dr. Sinha is of opinion, "that Ahmad Shah Abdali's method defeated its own purpose. It enabled the Sikhs to organise war by means of war." Gradually the Sikhs succeeded in ousting the Afghans from the Punjab and from the year 1767 the year of the last invasion of Abdali, the position of the Sikhs began to grow stronger. Between 1767 and 1773 the Sikhs succeeded in extending their sway from Saharanpore in the East to Attock in the West from Multan in the South to Kangra and Jammu in the North. Dr. Sinha has further described how the Sikhs formed themselves into Misl or confederacies, twelve in number and has also given an account of the cis-Sutlej Sikhs and has thrown light on the offensive and defensive role of the Sikhs.

In the last two chapters, Dr. Sinha has discussed the feudal form of the confederate organisation of the Sikhs.

He considers the central government of the Sikh confederation very weak in spite of its theocratic character. Every Misl through a component part was practically independent.

If the Sikhs showed signs of decline, Dr. Sinha, holds, it was inevitable: The chiefs of Misls degenerated from self-sacrificing fighters for the National cause into self seeking free-booting bosons, and ultimately the rule of the strong individual emerged.

Towards the end, Dr. Sinha has given a useful bibliography and on the whole the book is a useful one. It is expected that Dr. Sinha will develop the points which have been dealt with rather summarily. Rise of Sikhs is a glorious chapter in the history of India and needs a very thorough handling as Dr. Hari Ram Gupta has done so far as the early History is concerned.

—O. P. BHATNAGAR.

THE SAYINGS OF RAMKRISHNA—With an explanatory life of Ramkrishna—compiled by Swami Abhedananda, Published by the Ramakrishna Vedanta Math 19 B, Raja Rajakrishna Street, Calcutta. Second Edition. July, 1946; pages 14+244. Price Rupees Threë.

The name of Ramakrishna Paramahansa has become a byword. With the various cultural activities in India and in America and other branches of social service in the shape of schools, colleges and hospitals Ramakrishna has become a distinct source of inspiration in modern India.

Swami Abhedananda was one of his foremost disciples. He heard directly from the lips of the Master and arranged his sayings in the book under review in four chapters—God, Saviour, Spiritual life and Parables. The chapter dealing with Spiritual life is the longest and of course, the much needed one for the student and man-of-affairs turning his thoughts towards God.

The sayings are replete with divine wisdom and the book contains the essentials of Hinduism from the lips of one who not only knew what Hinduism was, in theory but lived the life of a Hindu saint.

The greatness of Ramakrishna is also attested by two outstanding facts. The first is that his disciples Swami Vivekananda and Swami Abhedaranda successfully carried on the message of their Master in America and were instrumental in founding centres of religion and culture which are carrying on their activities even today. The second factor is that western savants have paid unstinted homage to the greatness of Ramakrishna and we may instance Prof. Max Muller and Romain Rolland who have written the life of Ramakrishna in a spirit of deep faith and unbounded admiration. The centenary celebrations of the birth of Ramakrishna were celebrated in India in 1936 and 3 volumes of essays have been published under the name of the "Cultural Heritage of India" and in fact, Hindu culture and tradition from the times of the Vedas and Upaniṣads shows a continuity of development down to the present day culminating in the life of its saints like Ramakrishna.

The sayings are written in chaste and simple English. Sanskrit words are explained in full so that even a foreign reader could understand them. An account of the main incidents of Ramakrishna's life is given in 32 pages.

A word of praise is deservedly due to the *Ramakrishna Vedanta Matha*, Calcutta, for the fine paper, good printing and flexible gilt cover which all remind one of the presentation copies of the Bible.

We heartily commend the book to those who are interested in the teachings of the Paramahansa.

ŚATAKA-TRAYAM OF BHARTṚHARI—For the first time critically Edited by Prof. D. D. Kosambi. With an ano-

onymous Sanskrit commentary Edited by Pandit K. V. Krishnamoorthi Sharma of Bhandarkar Oriental Research Institute, Poona. Bhartiya Vidya Series No. 9. Published by Bhartiya Vidya Bhavan, Bombay. Pages 13 + 8 + 176. Price Rs. 5-8-0. 1946.

Bhartṛhari or his *Śataka-Traya* is famous among all classes of students. Even as early as 1651, Abraham Roger translated his writings in the Dutch language. And now, many of our vernaculars contain some or much of his writings. This brought in many interpolations, variations, and discrepancies in original Sanskrit text. Its popularity gave way to many misconceptions about the size, structure and contents of its original. So, there was a long-felt need for a critical edition. Prof. D. D. Kosambi deserves our congratulation for having removed this desideratum by having brought out such an edition.

The book contains introductions in English and Sanskrit, besides the *Paddhati* Division of the Text. Prof. D. D. Kosambi has consulted over two hundred Mss. He has for the sake of convenience divided them into Devanagari, Telugu, Grantha, and Malayalam groups by classifying the scripts. Practically all the Mss are corrupt. But some of them have individuality of their own for instance नार, नृ and नृ. The influence of Northern recension on some of them cannot be wholly denied. The frame-work is liable to change in every version, for instance, in the Tukā Brahmananda version. (तु१).

Prof. Kosambi's procedure in fixing the order of the verses seems to be most scientific. Besides, his selection of 'a reading that *explains* all variants' is generally good ; for that is a risky task of an editor. This adds to the beauty of a balanced and well-adjusted structure of the text.

Pt. K. V. Krishnamoorthy Sharma has edited the anonymous Sanskrit commentary with great care. He has tried to avoid all the possible errors that are likely

to have crept in. He has included the variants in commentary too. His calligraphic knowledge is remarkable, as is evident from the handling of this commentary—such a text as has changed its framework, according to some, many times.

Prof. Kosambi's work is commendable. We may easily recommend the edition to our readers. We are looking forward with eagerness to the comprehensive edition of *Śātakatrayam*, which may throw more further light on Bhartṛhari.

THE RIGVEDIC CULTURE OF THE PRE-HISTORIC INDUS VOL. I.

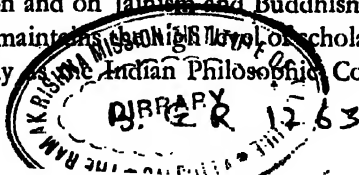
By Swami Sankarananda. Foreword by Bhupendranath Datta D.Phil. Published by the Abhedananda Academy of Culture, 19 B. Raja Rajakrishna Street, Calcutta. 2nd Edition pages x. 8+40+159. Price Rs. Eight.

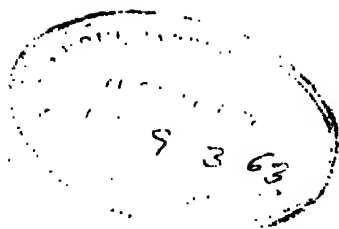
The subject of the Indus Valley civilisation has opened up a new chapter in the history of India and it is difficult to arrive at conclusions which could be unanimously accepted by all students. The materials which have come to light though ample are capable of yielding more than one conclusion. Sir John Marshall, the ex-Director-General of Archaeology for India, is the official interpreter of the finds. It is highly refreshing to find that Indian scholars have studied the same materials with true critical insight so necessary for historians and it is not surprising that they have arrived at results which are often opposed to the view of spokesman of the Government. Among such Indian scholars who have worked on the subject Swami Śankarananda is one and he deserves our thanks for laying bare one of the earliest periods of Indian History. The 2nd edition is a substantial improvement on the first edition which we had occasion to review earlier and is really a new book. *Inter alia*, students of religion will be indebted to Swami

Śankaranada for establishing that the Śiva-linga worship in the linga (अक्षर) form has nothing to do with any cult or cults of other countries and thus the fangled ideas of foreigners will no longer show their appearance in the scholarly world. The logic and argument exhibited on every page makes the book very authoritative both for the student of Indian History and for the scholars who are now contemplating of bringing out a complete History of India by its own historians. There is an elaborate foreword by Dr. Bhupendranath Datta discussing all the points at issue.

PROCEEDINGS OF THE EIGHTEENTH INDIAN PHILOSOPHIC CONGRESS. Lahore, 1943. Part II, pp. iv 289+4. Editor Dr. J. M. P. Mahadevan.

The above contains 30 of the papers presented to the 18th Indian Philosophy Congress held at Lahore in 1943. The first paper is the presidential address of Prof. P. N. Sreenivasachariar containing much food for laymen and politicians in power. The philosopher reasons in all various ways that "mankind should give up the present day antagonisms based on differences of race, culture and religion"; but the difficulty lies in the politician holding the reins of government following this principle and enforcing it among the lay public. The addresses of some of the sectional presidents of the Congress are also included in the book. Mr. Raghavendrchar of Mysore delivered the presidential address on Madhva's Absolute in the Indian Philosophy section. Dr. J. M. P. Mahadevan contributes an article on Māṇḍukya Kārikās supporting the traditional view that the Kārikās exhibit both unity of theme and unity of authorship. That Madhva is not a monist is the subject of another paper. There are interesting articles on Kant, Hegel, Bergson and on Jainism and Buddhism. The volume under review maintains the high level of scholarship expected of such a body as the Indian Philosophic Congress.





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